Author:
Rosevear, Stephen

Title:
Regional policy and the British motor vehicle industry 1945-64 : a study in selective intervention and the economics of industrial location.

Regional policy and the British motor vehicle industry 1945-64: a study in selective intervention and the economics of industrial location

Stephen Rosevear

A thesis submitted to the University of Bristol in accordance with the requirements of the degree of Ph.D. in the Faculty of Arts, Department of Historical Studies, November 1998.

Abstract

This thesis examines the wartime planning and postwar administration of regional policy and its relationship with the British motor industry. It presents a three part analysis, based on government papers and business records. Part One consists of two chapters which explore the intellectual and industrial context of UK regional policy. Chapter Two focuses on the nature and character of potential policy responses. Chapter Three centres on the motor industry, and explains the economic importance of the sector. Part Two deals with policy execution. It covers the period from 1945 to 1964, and examines the political and administrative background to intervention. It argues that the extent and radicalism of British regional policy from 1945-51 has been exaggerated, and suggests that a fundamental revolution in intervention did not occur until the 1960s. This revolution centred on the Board of Trade's acceptance of coercion as a legitimate policy tool. The discussion uses examples from the motor industry to illustrate policy evolution, and deals with a wave of expansion which saw new factories established in Development Areas during 1960. Part Three attempts to analyse the effects of this relocation on motor firms. The analysis suggests that relocation increased production costs, although there was compensation through regional development incentives and lower labour costs. It is suggested that previous studies have underestimated the role of financial incentives in redressing transport costs. Finally, Chapter Eight examines labour relations in the new plants. It finds that Development Areas were more prone to strikes than core manufacturing regions. An important contributing factor was management's experiments with new forms of work discipline. While recognising that there was a regional element involved in disruption, the analysis argues that labour difficulties should be reinterpreted as part of an industry-wide crisis affecting organisational change.

Acknowledgements

Many people have contributed to this project. I would not have been able to begin my research without the generous backing of a University of Bristol postgraduate scholarship. Vital financial support was also given by a grant from William Ashworth's bequest to Bristol University, and monies from the Michael Postan travel scholarship.

Acknowledgements are also due to the archivists and librarians who made data collection such a pleasure. In particular I would like to thank Richard Storey and his staff at the Modern Record Centre, the hard-pressed workers at the Public Record Office in Kew and their colleagues at the Scottish Record Office in Edinburgh. In all cases, their patience was exemplary.

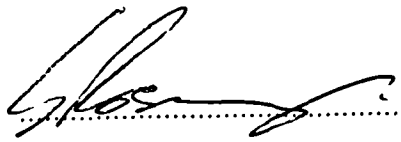
I have also benefited from the advice and comments of many friends, conference delegates and students. Some of my greatest debts are owed to Professor Bernard Alford, Steve Broadberry, Keith Cowling, Nick Crafts, Peter Law, Rodney Lowe, Carlo Morrelli, Graham Robson, Neil Rollings, Peter Scott, Nick Tiratsoo and Jim Tomlinson, who all offered valuable comments.

Finally, I owe a special thanks to my advisor, Roger Middleton. Throughout the research he offered the encouragement and support which kept my project alive. His comments were always helpful, and he struck the right balance between encouragement and hard-edged criticism.

Author's Declaration

This is to confirm that this thesis is the author's own work completed under the supervision of the Department of Historical Studies, University of Bristol.

The views expressed in the dissertation are the views of the author, and in no way reflect the views of the University of Bristol.



Stephen Rosevear

Contents

List of Figures		8
List of Tables		9
Abbreviations		11
1	**INTRODUCTION**	**12**
1.1	Research Issues	12
1.2	The British 'Regional Problem'	13
1.3	Structure of the Study	18
1.4	Implications	23
PART I	**REGIONAL POLICY CONTEXT**	**25**
2	**The Intellectual Context**	26
2.1	Introduction	26
2.2	Two Concepts of Regional Policy	26
2.3	Regional Policy Tools	33
2.4	British Regional Policy: a comparative analysis	38
2.5	Conclusion	47
3	**The Industrial Context**	49
3.1	Introduction	49
3.2	The Economic Significance of the Motor Industry	49
3.3	Long Run Trends	58
3.4	Demand Factors	69
3.5	Supply Factors	75
3.6	Conclusion	82
PART II	**REGIONAL POLICY EXECUTION**	**83**
4	**Labour's Regional Policy 1945-51: a Question of Efficiency**	**84**
4.1	Introduction	84
4.2	Reviewing Policy	85
4.3	Applying Policy (1) 1945-49	90
4.4	Applying Policy (2) 1949-51	106
4.5	Policy Developments	112
4.6	Conclusion	114

5	**Conservative Regional Policy 1951-58: a Question of Ideology**	**116**
5.1	Introduction	116
5.2	Reviewing Policy	117
5.3	Applying Policy	125
5.4	Policy Developments	138
5.5	Conclusion	141
6	**Conservative Regional Policy 1959-64: a Question of Expediency**	**142**
6.1	Introduction	142
6.2	Reviewing Policy	143
6.3	Applying Policy	156
6.4	Policy Developments	185
6.5	Conclusion	191
PART III	**REGIONAL POLICY ASSESSMENT**	**193**
7	**Motor Industry Cost Analysis**	**194**
7.1	Introduction	194
7.2	Industry Cost Structure	195
7.3	Spatial Cost Profile	197
7.4	Output Calculations	202
7.5	Transportation and Related Costs	206
7.6	Labour Costs	216
7.7	Financial Incentives	222
7.8	Summary	227
8	**Labour and Industrial Location**	**231**
8.1	Introduction	231
8.2	The Labour Function (1) Quality	232
8.3	The Labour Function (2) Strikes	242
8.4	The Costs of Industrial Action	256
8.5	Towards an Explanation	263
8.6	Conclusion	272
9	**SUMMARY AND CONCLUSIONS**	**273**
9.1	Introduction	273
9.2	Industry and the State	273
9.3	Motives and Processes	274
9.4	Expectations	275

9.5	The Right Sites?	276
9.6	Consequences	277
9.7	Reflections	277
	Appendix - British Motor Industry Statistics	**279**
A1.1	Introduction	279
	Manuscript References	**297**
	Conservative Party Archives	297
	Modern Record Centre	297
	Public Record Office	299
	Scottish Record Office	306
	Bibliography	**308**

List of Figures

1.1	British Motor Assembly Plants, 1965	21
2.1	Pred's Behavioural Matrix	29
3.1	Gross Output of the Motor Industry as a Percentage of Total Manufacturing Output	51
3.2	Capital Expenditure in the Motor Industry as a Percentage of Capital Expenditure in Manufacturing Industry	52
3.3	Employment and the Motor Industry	55
3.4	UK Motor Vehicle Production, 1908-91	58
3.5	Car Production by Principal Nations, 1940-92	64
3.6	Variations from the Long Term Trend Growth of New Registrations, 1949-70	71
4.1	Distribution of Industry Committee Structure, 1947	94
4.2	Committee on Research into Industrial Location	105
5.1	Industrial and Manufacturing Division 6: Internal Organisation, 1952	139
6.1	Monthly Regional Unemployment Rates, 1956-60	144
6.2	Factory Building Approvals, 1952-65	154
6.3	Percentage of Building Projects Refused an IDC in the South East Region, 1956-77	158
6.4	Profile of Average Refused Project, 1956-76	158
7.1	Spatial Cost Profile	198
7.2	Spatial Cost Curve	199
8.1	Strike Frequency, Motor Vehicles, 1946-59	248
8.2	Days Lost per 1,000 Workers, Scottish and British Industry, 1955-59	249
8.3	Days Lost Per Employee: Percentage Deviation from Traditional Manufacturing Regions	252

List of Tables

1.1	Regional Unemployment Rates, 1929-88	14
2.1	Microeconomic Regional Policy Tools	36
2.2	The Main Instruments in UK Regional Policy, 1928-83	42
3.1	Requirements per £100 of Final Output by the Motor and Cycle Industry, 1954	53
3.2	Employment in the Merseyside Motor Industry, 1984	56
3.3	Model 'T' - Production and (Current) Prices, 1908-14	60
3.4	Motor Industry Profile, 1922-24	65
3.5	British Vehicle Production Shares, 1929, 1939	65
3.6	Strike Activity in Motor Manufacturing, 1949-73	78
4.1	The Board of Trade's Postwar Policy Portfolio	89
4.2	Postwar Building in the Development Areas	91
4.3	Shadow Factory Employment in Coventry, August 1943	97
4.4	The Board of Trade's Location Literature, 1948	102
4.5	Factors Influencing the Location of Firms in the Southern Region, Board of Trade Survey, Sept., 1949	107
4.6	Applications for DATAC loans, 1945-51	110
5.1	Building Licence Exemption Limits (£ per year), 1945-54	123
5.2	Industrial Development Certificate Refusals, 1954-59	136
5.3	Manufacturing Industry, Regional Moves by Destination, 1945-58	137
6.1	Labour and Conservative Shares of the Votes in Scotland and England, General Elections 1945-87	149
6.2	Differences in Labour and Conservative Performances in Scotland and England 1945-87	150
6.3	Applications for Financial Assistance under the Distribution of Industry (Industrial Finance) Act	157
6.4	Scottish Council Transport Cost Estimates	168
6.5	Engineering Weekly Earnings (Shillings) 1948-60	169
6.6	Motor Industry Expansion, 1960-63	178
6.7	Standard Triumph - Estimate Cost of Liverpool Development Plan, February 1960 (£)	183
6.8	Financial Assistance Granted to the Motor Industry (July 1962)	184
6.9	Plans of 87 Firms Whose IDCs were Rejected	186
7.1	Motor Industry Cost Structure - Major Items	196
7.2	Specimen Percentages of Material Cost of Cars Accounted for by Bought-Out Components	197
7.3	Unit Factory Cost of a Mass Produced Car, 1952	203
7.4	Plant Output, 1971/72 (Equivalent Units of Production)	204
7.5	Percentage of Vendor Supplied Parts by Distance from Linwood, 1972	210
7.6	Transport-Related Cost Penalties (£)	214
7.7	Effect of a 5% Increase on Transportation Costs (£)	215

7.8	Labour Costs by Region, 1975 (Ave. hourly rate per employee)	217
7.9	Annual Per Employee Labour Cost Differentials, Vehicles Group - Decentralised versus Traditional Areas	220
7.10	Annual Labour Cost Differentials by Plant, Decentralised versus Traditional Areas (1972 prices)	221
7.11	Financial Incentives, 1971/72 (£)	225
7.12	Summary of Locational (Costs)/Benefits, 1972 (£)	230
8.1	Development Area Pay Regimes, 1964	234
8.2	Age and Grade Requirement Guidelines: Linwood	235
8.3	Industries Losing Most Men to Ford and Vauxhall	238
8.4	Employee Training Schemes in Development Area Plants	240
8.5	Major Strike Frequency, All Industries, 1946-59	246
8.6	Days Lost Per Worker: Traditional Motor Manufacturing Areas Versus New Locations	251
8.7	Workers Involved Per Employee: Traditional Motor Manufacturing Areas Versus New Locations	254
8.8	Days Lost Per Striking Worker: Traditional Motor Manufacturing Areas Versus New Locations	255
8.9	Model History, Halewood and Ellesmere Port, 1963-92	260
8.10	Ford Labour Performance Indicators Per Worker, 1967-76	264
8.11	Ford Labour Performance Indicators Per Worker, 1975-84	265
A1	Production of Motor Vehicles in the UK, 1908-92	280
A2	Motor Car Production by Principal Countries, 1940-92	282
A3	Gross Output of Motor Vehicle Industry as Proportion of Total Manufacturing Gross Output, 1948-90 (current prices)	284
A4	Employment in the Motor Industry, Selected Years, 1948-90	285
A5	Capital Expenditure in the Motor Industry, Selected Years, 1948-90 (current prices)	286
A6	Summary of Motor Vehicles in Use, Great Britain and Northern Ireland, 1904-81	287
A7	Summary of New Registrations of Motor Vehicles, 1946-91	289
A8	Analysis of Motor Vehicle Exports as Percentage of UK Total Exports, 1952-77	291
A9	British Motor Industry Trade Statistics (current prices)	292
A10	Percentage of Motor Industry Exported, 1946-68	294
A11	Import Penetration - Passenger Cars (% of New Registrations)	295
A12	Pre-tax Profits (Loss) in UK Motor Industry, 1945-77 (£m, current prices)	296

Abbreviations

AEU	Amalgamated Engineering Union
AMMA	American Motor Manufacturers Association
BLMC	British Leyland Motor Corporation
BMC	British Motor Corporation
BMH	British Motor Holdings
BMIHT	British Motor Industry Heritage Trust
BOTAC	Board of Trade Advisory Committee
CAS	Centre of Auto Safety
CBI	Confederation of British Industry
CSO	Central Statistical Office
DA(s)	Development Area(s)
DATAC	Development Area Treasury Advisory Committee
DEA	Department of Economic Affairs
ERDF	European Regional Development Fund
FBI	Federation of British Industries
HMSO	His/Her Majesty's Stationary Office
IDC	Industrial Development Certificate
IM6	Industries and Manufactures Division - the Board of Trade department responsible for distribution of industry policy
IRC	Industrial Reorganisation Corporation
MLH	Minimum List Heading
MRC	Modern Record Centre
NEDC	National Economic Development Council
NEDO	National Economic Development Office
NUGMW	National Union of General and Municipal Workers
NIESR	National Institute of Economic and Social Research
OPECI	The first oil price shock in 1973
PEP	Political and Economic Planning
PRO	Public Record Office
REP	Regional Employment Premium
SDA(s)	Special Development Area(s)
SET	Selective Employment Tax
SEP	Selective Employment Premium
SMMT	Society of Motor Manufacturers and Traders
SRO	Scottish Record Office
STUC	Scottish Trades Union Congress
TGWU	Transport and General Workers Union
TUC	Trades Union Congress

1 Introduction

§1.1 Research Issues

From 1945 to 1964, the Board of Trade found itself commanding the pattern of industrial location in Great Britain. It was charged with securing a 'proper distribution of industry' while combating regional unemployment differentials. Amongst its weapons were Building Licences and Industrial Development Certificates. These were negative location controls, which identify Britain as one of the few Western nations to favour a coercive regional policy.

Although there have been exhaustive inquests into both regional policy and site selection, the gap between the two has rarely been forded. In particular, location surveys have focused on *ex-post* theoretical constructs, while policy studies have been dominated by macroeconomic political debates.[1] This study examines industrial steering within a microeconomic context. By concentrating on a specific manufacturing industry and specific location decisions, it will address five important questions:

- How did the relationship between industry and the state develop in postwar Britain?
- What were the processes and motivations behind British location policy?
- Were locational penalties anticipated at either government or enterprise level?
- Did controls lead to poor site selection - with quantifiable cost penalties?
- What were the consequences for individual firms?

The motor sector offers an ideal candidate for study. In quantitative terms, it was the UK's most important export industry. In policy terms, its continued expansion attracted the interest of both politicians and the Board of Trade. Since expansion was subject to state approval, the motor industry became necessarily entangled in IDC disputes. Major investment projects were diverted to the regions, and 'package deals' were negotiated between manufacturers and the state. To date

[1] For example, compare the literature review in Smith (1981, pp. 68-107) with Parsons (1986), Scott (1996) or Armstrong & Taylor (1993).

historians have been unable to assess the effect of the moves, retreating into broad generalisations and untested hypotheses (e.g. Dunnett 1980, Foreman-Peck *et al* 1995). However, a detailed study can restore regional policy to the heart of political and economic debate. This is because too many discussions over the legitimate role of the state have glibly assumed that forced relocation was a disaster for British car firms.

The following investigation tests this assertion. It presents a three part analysis, based on government papers and previously confidential business records. A brief outline of the methods and arguments employed in each chapter follows, as well as an indication of how the study relates to the existing historiography. But first, we examine the nature of Britain's regional problem and its place in political debate.

§1.2 The British 'Regional Problem'

Britain's twentieth century 'regional problem' has centred on a long term division between the fortunes of 'inner' and 'outer' Britain (Table 1.1). This distinction developed in the interwar period, and is still used as a proxy for the more familiar concept of the north-south divide (Middleton 1996, p.154). Regions in the north, Wales and Scotland had unemployment rates well above the UK average in the 1930s, and this trend persisted through the postwar period. Conversely, the South, South East and Midlands enjoyed relatively prosperous conditions. It was previously thought that this pattern became established after 1918, but Southhall's work (1988) points to a long term regional disequilibrium in Britain.

TABLE 1.1

REGIONAL UNEMPLOYMENT RATES (1), 1929-88 (%)

	1929	1937	1951	1964	1973	1979	1988
London & South East	5.6	6.3	0.9	1.0	1.3	2.9	4.9
East Anglia					1.6	3.7	4.7
South West	8.1	7.8	1.2	1.5	2.1	4.6	5.7
West Midlands	9.3	7.2	0.4	0.9	1.7	4.7	8.2
East Midlands	9.3	6.6	0.7	1.1	1.8	3.8	7.0
Yorks. & Humberside			0.7	1.1	2.3	4.7	9.1
North East	13.7	11.0					
North West	13.3	14.0	1.2	2.1	2.9	5.9	9.9
Northern	..	17.9	2.2	3.3	3.9	7.3	11.5
Scotland	12.1	15.7	2.5	3.6	3.8	7.3	10.9
Wales	19.3	22.3	2.7	2.6	3.0	6.3	9.5
Inner Britain(2)	6.3	5.9	0.8	1.1	1.7	3.9	6.1
Outer Britain(2)	12.9	14.5	2.6	3.2	3.5	6.8	11.1
United Kingdom	9.7	10.1	1.3	1.7	2.0	4.7	7.6

NOTES: (1) The administrative divisions were rearranged periodically, thereby precluding exact comparisons over time (2) Inner Britain is here defined as London & the South East, the South and Midlands and East Anglia; Outer Britain as Northern England, Yorkshire and Humberside, Wales, Scotland and Northern Ireland.

SOURCES: Middleton (1985, table 2.1), Broadberry (1991, table 7.2).

This disequilibrium was associated with the antiquated structure of Britain's industrial base and long term changes in domestic and world market conditions. In the former case, the British staple industries, based largely in the outer regions, experienced a painful period of readjustment during which many jobs were lost. At the same time, the expanding industrial sectors of light engineering, electronics, chemicals etc. concentrated their activities in the South and Midlands. These 'new industries' valued market proximity higher than access to raw materials, and depended on domestic consumption rather than international demand. These forces combined to produce a massive structural problem in interwar Britain, ameliorated only by rearmament and a return to hostilities in 1939.

The postwar regional problem was also related to industrial structure. We shall see in later chapters how the recession of 1958/9 marked a climacteric for theory and policy. Prior to this, the staple industries in 'outer' Britain had shared in an international restocking boom and strong domestic growth. When these forces were exhausted at the end of the 1950s, Britain's regional economies returned to historical trends. Unemployment increased, and commentators once again focused on the north-south divide.

This brief history serves to underline the longevity of Britain's regional problem. But while the nineteenth century origins of this phenomenon are clear, it was not until the 1920s that politicians were forced to confront the problem. This was due to a mixture of economic, social and political concerns.

At a basic level, regional unemployment disparities became socially unacceptable. Even before the first Liberal welfare reforms, it was clear that issues of social justice had become policy concerns. This was especially true of a period when information about social conditions and poverty was being widely disseminated by the first social investigators.[2] The increasing attention paid to regional problems can be viewed as part of a developing consensus on social issues, where moral concerns and the extension of the franchise undermined traditional laissez faire ideas. The Liberal statesman, President of the Poor Law Board and later Chancellor of the Exchequer, Goschen, outlined this new mood in 1883:

> . . . I hold the principles of 'Laissez-faire' to have lost favour, chiefly owing to moral considerations, to the assertion of the claims other than material interests, and to a growing feeling that it is right deliberately to risk commercial and industrial advantages for the sake of reforming social abuses, and securing social benefits (Middleton 1996, p.225).

People also began to recognise broader macro-social consequences of persistent inequality. Primary amongst these were the problems caused by overcrowding and selective migration. On the one hand, labour was concentrated in stressful urban settings. On the other, depressed areas lost their most able and competent people. The result was a kind of regional apartheid - where an affluent and socially diverse core coexisted with a culturally and materially impoverished periphery. In the

[2] For details see Bulmer *et al* (1991).

context of 1930s Britain, this was a powerful analogy for the conditions outlined in *An English Journey* and *The Road to Wigan Pier*. Here the descriptions of 'outer' Britain had focused on disintegrating communities rather than economic distress.

Politically speaking, there were powerful reasons why British parliamentary parties should be interested in regional prosperity. As we have seen, social policy became important with the extension of the vote beyond the middle class. In this sense, regional policy might be viewed as part of the legislative package associated with universal suffrage. In the same vein, it is hardly surprising to find that the Labour party has depended on votes from 'outer' Britain. In fact two of the most active periods of regional policy coincided with a Labour administration (1945-51, 1964-70). But with the publication of the Employment White Paper of 1944, both main political parties professed a nominal commitment to reducing regional unemployment differences.

Underlying this commitment was a belief that unemployment affects voting at the constituency level. By the early 1980s, a number of authors had succeeded in relating government popularity to economic variables (Gibson 1992). We shall see in later chapters how fears of regional depression in the 1940s prompted wartime policy reviews, and why the collapse of the Scottish vote in the mid 1950s persuaded Conservatives to reactivate regional policy. Similarly, Labour's commitment to regional planning after 1964 appears to have paid significant dividends, contributing to good local results in the 1970 general election.

Gordon (1990) has offered a different perspective. He argued that British regional policy is a blocking strategy, and that 'its basis should be sought neither in theoretical rationales or short term electoral calculations, but in a perceived threat to two party hegemony in the United Kingdom'. The threat arises from territorial issues being placed on the political agenda, displacing the traditional class-bound issues of national politics. This would endanger both left and right, generating 'oppositional claims on the central state'. This argument invites speculation as to how the motives of regional policy vary between parties, and suggests that 'consensus politics' should be re-interpreted in terms of an amended Downsian model of competitive democracy.

Even if one rejects Gordon's general thesis, he offers an interesting insight into the nature of British economic policy making. Regardless of the government's true intentions, he notes how regional policy has always been 'dignified and reinforced' by efficiency arguments. Many of these 'efficiency' claims have related to the policy gains identified in economic theory. These derive from a simple proposition: if the unemployment rate could be permanently reduced in high unemployment areas without leading to a loss of jobs in areas of low unemployment, the whole nation would be better off - the previously unemployed would be producing output and taxpayers would not have to support the jobless. Regional equilibrium would produce a national saving, moving output towards the production possibility frontier and increasing economic welfare.

A second proposition is concerned with wage inflation. In McCrone's words (1969, p.38), 'a better regional balance of economic activity enables inflationary pressures to be controlled more easily without creating excessive pools of unemployment'. Persistent disparities in the unemployment rate mean that whenever a significant business upturn occurs, inflationary pressures build up very quickly in the low unemployment regions. In an imperfect labour market, wage inflation is then transmitted to different areas through national pay agreements and inter-plant bargaining. As will be demonstrated, many individual postwar location decisions centred on the possible trade off between wage inflation in the South and higher operating costs in peripheral locations. In most cases relocation was perceived as the greater threat.

These and many other issues were familiar to economists in the 1930s. However, by that stage, the economic rationale for regional policy had not been fully articulated. Typical of the tenor of contemporary analysis was Champernowne's work, which argued that spatial variations in unemployment rates prevented recovery from a trade depression:

> This is because some regions achieve fairly full employment, and perhaps experience a shortage of labour, when unemployment is still heavy in others. When recovery continues, shortage of labour in the prosperous regions may check both investment there, and also, through causing a shortage of materials from the prosperous regions, check or cause a postponement of investment even outside prosperous regions. Shortage of goods from the prosperous regions may also retard recovery by making people spend more

> on goods imported from abroad: in so far as the shortage causes prices and dividends to rise in the prosperous region, the stimulating effects of increased investment may be wasted on a transfer of income from those who save little to those who save much (1938, p.94).

Champernowne's approach reflected the embryonic nature of British regional science. As late as 1969, Brown (p.789) noted that the subject lacked 'a coherent body of analysis applicable to the affairs of a country'. The discipline was dominated by American and continental economists, and it was not until the 1960s that British authors began to embrace more professional and theoretically challenging critiques. Although the lack of a clear economic rationale handicapped policy debate, it did not stop economic issues surfacing. But by modern standards, these discussions remained ill-defined.

In March 1934, *The Times* reflected the changing policy context by running a series of articles entitled 'Places without a future'. These sympathetically dealt with the plight of a typical Durham village. The editorial which concluded the series argued that there was a 'special' regional problem requiring action 'of an emergency type'. To Parsons (1986, p.10) this marked a watershed,

> *The Times* editorial was to introduce into political debate for the first time the notion that there was a distinct and separate problem in the existence of the 'depressed', or as it chose to call them 'derelict' areas; a problem which required the introduction of special measures of central intervention in the economy for the benefit of hard struck areas.

Thus, it is a combination of social, political and economic factors which help explain why the regional problem became so important in twentieth century policy debates. The following study examines these debates from the 1930s through to the 1960s. It examines how politicians and officials conceptualised the problem, and the way in which the state became reconciled with the notion of direct intervention.

§1.3 Structure of the Study

Part One of the study consists of two introductory chapters which explore the intellectual and industrial context of UK regional policy. Chapter Two focuses on the nature of potential policy responses. Central to the discussion is a distinction between market based and interventionist remedies; the former concentrating on

removing imperfections in labour and capital markets, the latter identifying fundamental flaws in market solutions. The analysis outlines why existing studies have characterised Britain's regional policy as interventionist, and suggests that a detailed investigation of policy execution may challenge this perception. The chapter also outlines the novelty of Britain's policy regime. While the combination of controls and incentives was not unique, the speed of introduction and the nature of these schemes went beyond anything attempted in Europe. The chapter argues that British policy represented a unique experiment, even if officials doubted its value.

Chapter Three focuses exclusively on the motor industry. It explains the economic importance of the sector, while examining long run trends and demand and supply conditions. It outlines why car manufacturing was targeted for regional policy intervention, and the contradictions and problems created by intervention. It also provides a brief survey of the literature on the rise and decline of British car manufacturing, and seeks to locate intervention in its correct historical framework. Finally, it focuses on technological and organisational change, and argues that intervention in the 1960s coincided with a transformation crisis. This crisis saw British manufacturers struggling to adopt fordist methods in an increasingly competitive international market place.

Part Two of the thesis is concerned with policy execution. It covers the period from 1945 to 1964, when the Board of Trade's IM6 division was placed in charge of location controls. It examines the political background to intervention, and the administrative changes associated with policy shifts. The postwar historiography has generally distinguished four phases of regional policy activity in this period. Typically, 1945-50 is regarded as 'active', when policy was dominated by physical controls and the factory building programme; 1951-58 is viewed as 'passive', when inducements and checks were held in abeyance by successive Conservative governments; 1959-63 is regarded as 'transitional', with severe regional problems prompting the return of selective intervention; while the years from 1963-70 mark 'the most prolonged, most intensive, and most successful attack ever launched on regional problems in Britain' (Armstrong 1991, p.315). The study questions these divisions, and argues in particular that the extent and radicalism of British

distribution of industry measures from 1945-51 has been exaggerated. The section also focuses on the period associated with Brittan's 'Great Reappraisal' in Tory thinking (1960-61). This reputedly saw the early adoption of many of the economic polices identified with Labour's 1964 administration, including 'a regional approach to unemployment' (Brittan 1971, p.141). The section examines this change from a civil service perspective, and argues that officials faced a fundamental break from their established role. This was because they were forced to impose solutions on industrialists for the first time.

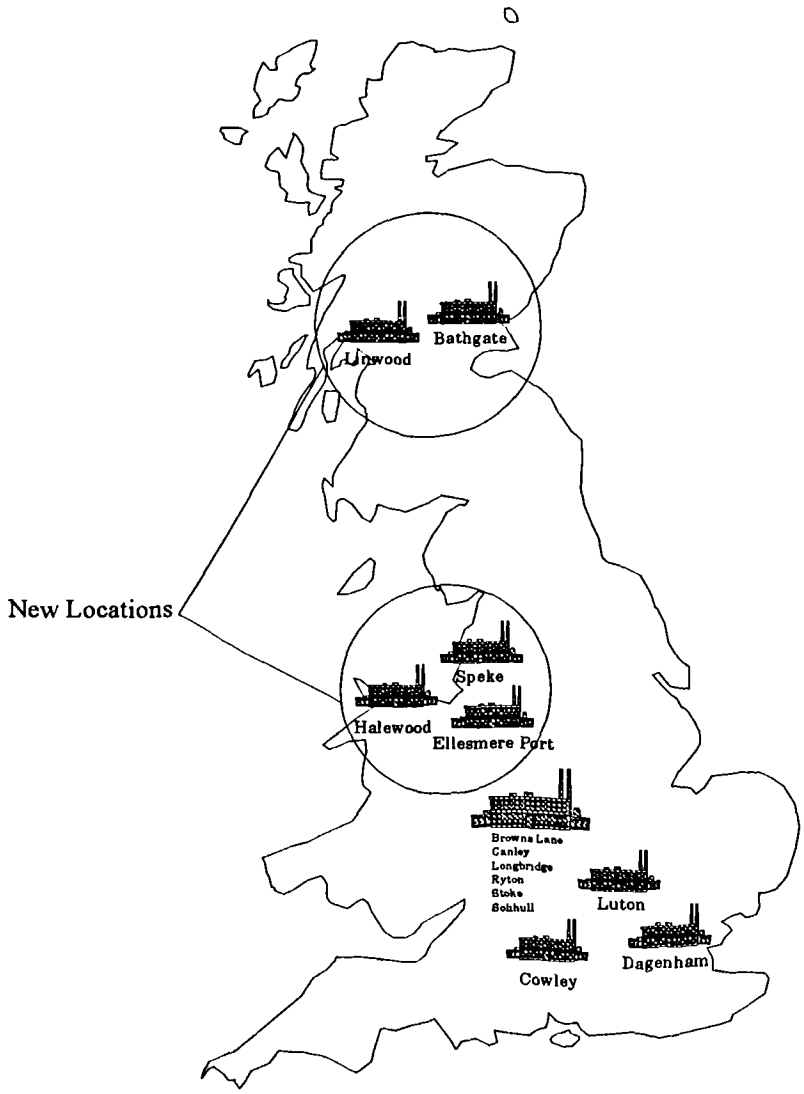
Individual chapters centre on the ongoing battle between efficiency and industrial relocation. In Chapter Four, the focus is on the immediate postwar period (1945-51). The chapter outlines, (i) how the Board of Trade came to dominate regional policy-making, (ii) the implementation of policy based on case studies from the motor industry, (iii) the internal capabilities of the ministries for policy-making, and (iv) a comparison between the 1945-47 and 1948-51 periods, rejecting 'policy on' versus 'policy off' comparisons. The chapter suggests that the government lacked the necessary economic intelligence and political drive to successfully challenge industrialists and that, as a result, Labour struggled to impose its will on business.

Chapter Five is concerned with regional policy execution from 1951-58, and examines events under a Conservative government committed to free enterprise capitalism. This chapter demonstrates the importance of the motor industry in establishing administrative precedents, and highlights the importance of ideology in conditioning policy response. This ideology represents a continuity between Labour and Conservative administrations, because officials and politicians remained unwilling to challenge industrialists.

Chapter Six concentrates on the crucial period from 1958 to 1964. It argues that there was a fundamental revolution in the tactics of regional intervention in the early 1960s. This centred on the Board of Trade's acceptance of coercion as a legitimate policy tool. A reluctance to enforce solutions on entrepreneurs was overcome by political pressure from the regions and a growing body of empirical evidence which changed the nature of location bargains. These developments paved the way for the strategic rethink associated with Brittan's 'Great

Reappraisal' and replaced a tradition of negotiated compliance with coercive intervention. Once again, the chapter uses case studies drawn from the motor industry to illustrate policy evolution. These form the core of Part Three's cost analysis, and are associated with a wave of expansion which saw new factories established in Scotland, Merseyside and Wales (Figure 1.1). The chapter suggests that the negotiation process indirectly discriminated against British firms, and allowed American-owned subsidiaries to acquire the best sites. This was because Ford and Vauxhall could draw on a wealth of US experience, while British firms were handicapped by their federated structure and boardroom disputes.

FIGURE 1.1
BRITISH MOTOR ASSEMBLY PLANTS, 1965



Part Three attempts to analyse the effects of motor industry relocation on individual firms. It does not tackle the related issue of policy efficiency or cost per job, since this is regarded as a distributional issue.[3] The brief is to highlight the microeconomic consequences of forced relocation, and to assess the costs and benefits associated with Development Area manufacturing.

Chapter Seven uses published and unpublished data to derive spatial cost profiles for individual plants. Among the sources exploited are the Labour Cost Survey, the House of Commons investigation into Regional Development Incentives, government files, confidential company papers and files from the Scottish Record Office. The investigation is based on a methodology pioneered by Luttrell (1962), and adopted by Smith in 1966. This distinguishes between basic and locational elements, and seeks to derive a per unit estimate of the extra costs incurred. Unfortunately the disparate nature of the sources only allows data to be calculated for a single year, but the estimates still represent the most comprehensive attempt to understand the consequences of relocation in the vehicle industry.

The estimates suggest that relocation did increase production costs, although there was compensation in the form of regional development incentives and lower labour costs. Scottish sites were particularly disadvantaged, although higher throughput would have improved performance. It is suggested that previous studies have underestimated the role of financial incentives and other subsidies in redressing transport costs, and that the failure of sites in Scotland and Liverpool is linked both to location, and the transformation crisis afflicting British motor manufacturing.

Chapter Eight examines the theme of labour relations in the new plants. Critics of regional policy have always claimed that 'the new plants of outer Britain suffered from poor if not poorer industrial relations than the original sites' (Foreman-Peck *et al* 1995, p.205). By using the Department of Employment's Industrial Stoppage Data, summaries from the Ministry of Labour and previously confidential employment records, this claim is tested. The chapter finds that the Development

[3] See the work of Moore and Rhodes (1973, 1977) and Moore, Rhodes and Tyler (1986) for a discussion of these issues.

Areas were more strike prone than core manufacturing regions, and that new plants experienced different patterns of conflict, with a greater emphasis on frequent, short term disputes.

The conventional explanation for these trends concentrates on the origins of new employees and greater militancy amongst 'green' workers (Turner *et al* 1967, p.174). However, the chapter highlights the importance of management style. This was important because all motor firms used their regional plants to experiment with new forms of labour discipline. While workers opposed many of these innovations, bosses also struggled to accommodate themselves to a new bargaining framework. The result was an extended period of industrial disruption which established damaging precedents.

Finally, the chapter considers the cost of industrial disruption. It argues that in British-owned plants, labour problems contributed to closure. For the American-owned plants, the effects were seen in unfavourable sourcing decisions and a difficulty in securing new investment. While recognising that a regional element was involved, the chapter argues that these difficulties should be reinterpreted as part of an industry-wide crisis affecting organisational change.

§1.4 Implications

The main findings of this thesis relate to the nature of regional intervention and the industrial context of policy appraisal. In the former case, the study highlights an area in which fundamental beliefs about the efficacy of free markets were defeated much later than has been assumed. A key element in this story was the way in which theory lagged behind ambition, and failed to generate the necessary intellectual or practical rationale for intervention. Despite the provision of coercive legislation, ministers and officials felt unable to challenge industrialists. It was not until 1960 that academic arguments and political pressure forced a tactical reappraisal.

In the latter case, the thesis underlines the importance of organisational change. It demonstrates how the failures of the decentralisation plan were linked to both location and a wider crisis facing British based manufacturers. The Development Area plants were the first experiments in a new form of industrial production, and

many of their problems derived from their owners' inability to confront this change. While location certainly played a part in their troubles, it is wrong to suppose that the regional policy experiments were simply 'doomed from the start'.[4]

[4] An editorial comment by *The Times*, February 12, 1981. It followed Peugeot-Talbot's announcement that Linwood was to close with the loss of 4,000 jobs.

PART I

REGIONAL POLICY CONTEXT

2 The Intellectual Context

§2.1 Introduction

If entrepreneurs are given a free choice, it is reasonable to assume that they will build their factories where the balance of economic advantages is greatest. By minimising costs and maximising profits, the invisible hand is invoked to optimise economic welfare. In this way, classical theory identifies the firm's interests with a greater sense of well-being.

But regional policy subverts the market. However constructed, it implies a failure of economic agents to satisfy policy makers' expectations. Consequently, the decision to intervene constitutes a fundamental assertion about the efficacy of market forces. There are three possible policy profiles: do nothing and rely on the invisible hand, address market imperfections through limited intervention, or directly impose solutions on entrepreneurs and the workforce. Each approach rests on different economic assumptions, and each is attractive to different shades of political opinion. This chapter places these decisions in their intellectual context. It seeks to map the options available to legislators, and relate them to the relevant strands of economic theory. It also briefly outlines the scope of Britain's policy regime, distinguishing between interventionist and market based initiatives.

§2.2 Two Concepts of Regional Policy

In the neo-classical world, regional unemployment differentials are a transitory phenomenon. This is because three mechanisms ensure market clearing. These are: (1) wages falling in areas of high unemployment and rising in areas of low unemployment, (2) workers migrating from low-wage to high-wage areas, and (3) firms moving from high wage to low wage areas (Armstrong & Taylor 1993, p.199). If any of these mechanisms fail, long term structural imbalances can result. According to some observers, the existence of such imbalances in interwar Britain provided a *prima facia* case for the implementation of a *market based* regional policy.

A market based approach to regional policy views long term disparities in regional unemployment rates as evidence of imperfections in the labour market and/or widespread barriers to capital and labour migration. Traditionally, commentators have located the largest scope for failure in the labour market, where mobility and pay flexibility are restricted by institutional rigidities.

A range of institutions can allegedly obstruct pay flexibility. These include industry-wide collective bargaining arrangements, trade unions and wage councils (McCormick 1991). Stoney and Bourn (1984) for instance, have argued that the high levels of unemployment in postwar Merseyside are a consequence of real wages being held above their equilibrium level. Institutional rigidities such as high unemployment benefits, minimum wages and trade union power 'fracture the relationship between pay and local conditions and severely constrict the inter-regional wage structure. Inter-regional labour flows are thereby hindered and geographical inequalities in unemployment tend to persist' (Walsh & Brown 1991, p.190).[1]

In terms of the interwar policy debate, neo-classical economists argued that sticky wages and labour immobility were caused by over-generous welfare benefits. While interwar governments shared this perception, the hypothesis remained flawed. As Alford maintains (1996, p.157):

> The alleged effects of welfare payments are based on an excessively simplistic view of the labour market which, for example, takes no account of the displacement costs of labour mobility. One of the most obvious and heavy of such costs was the much higher levels of rents and house prices in the more prosperous regions of the country compared with the areas of high unemployment, differences which far outweighed any possible marginal reductions in welfare provisions.

The second part of the neo-classical model centres on migration patterns. In postwar Britain, it is fairly clear that migration did not conform to expected patterns. Although traditionally depressed areas such as Scotland, the North and

---

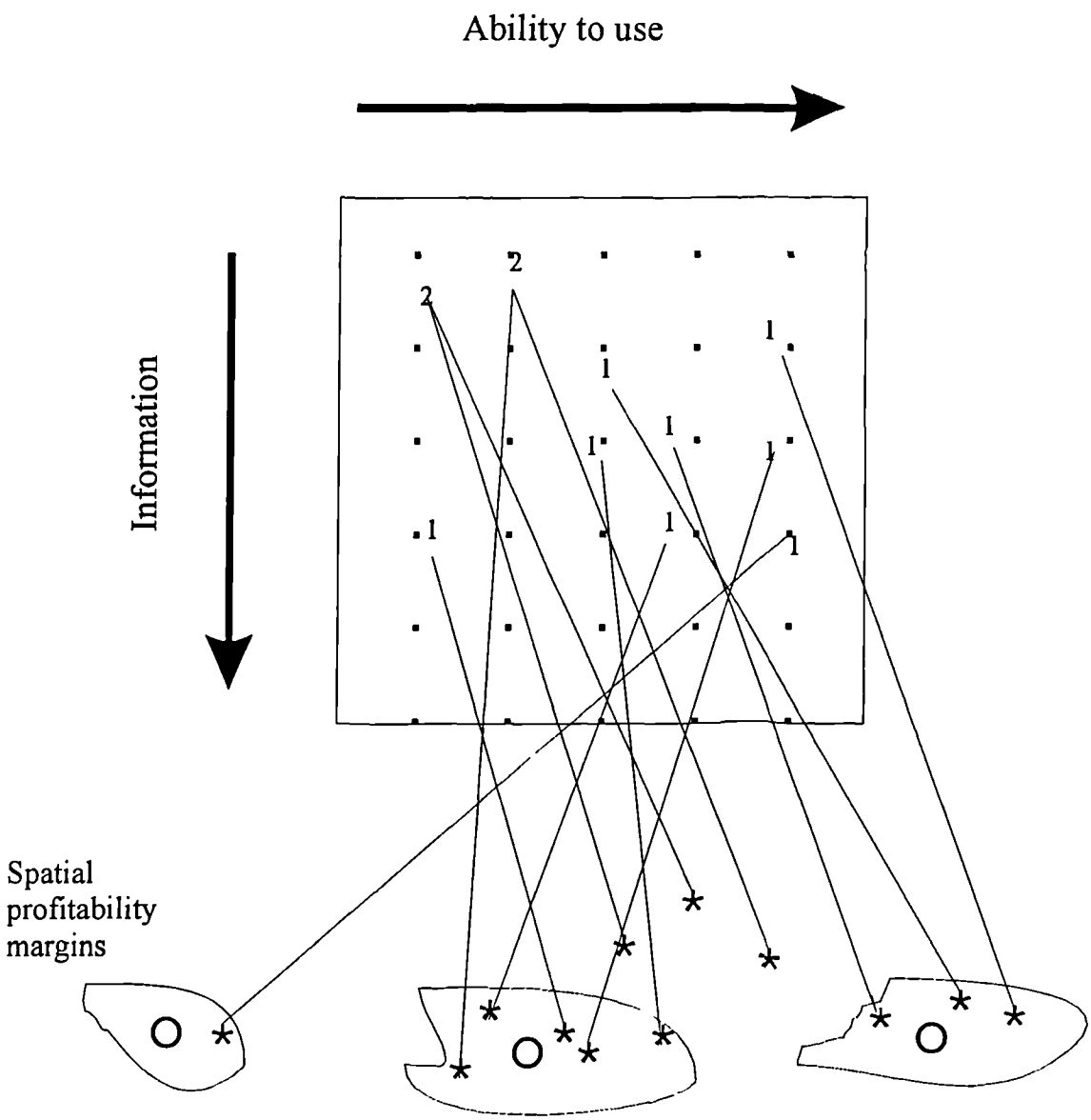
[1] Recent econometric investigations have failed to support this view. While the Bank of England (1988) discovered little link between unemployment variations and regional wages, Blackaby and Manning (1987) found that both the rate of unemployment and its change did affect earnings. Walsh and Brown (1991) also showed how wage bargaining has become increasingly decentralised, although they detected little enthusiasm for geographically differentiated payment systems.

North West did experience a net migration loss, the majority of migrants were non-manual (McCormick 1991, p.221). Research shows that although these flows were equilibrating, there was insufficient movement to make an impact on unemployment disparities (Pissardes & Wadsworth 1989). There are several reasons why net migration flows have not be large enough to combat regional unemployment differences. The first is cost. Migrants incur many costs, some pecuniary and some non-pecuniary (or 'psychic'). Pecuniary costs include the expense of moving house, whilst 'psychic' costs result from the loss of family ties and the problem of settling into a new community. Either can restrict mobility. The institutional framework is also important. Restrictions operate in the housing market (regional differences in house prices), the labour market (poor recruitment agencies and job centres), and through government policies (taxation and unemployment). Another important constraint is the efficiency with which information disseminates to individuals, a key finding in the recently developed discipline of labour market job search analysis (Armstrong & Taylor 1993, p.225). Finally, the availability of local authority housing can have an impact on migration patterns.

Information is also important for capital mobility. In 1937, the Board of Trade argued that 'individual choice has on the whole placed industry where the individual employer has found it economically most advantageous to place it' (Board of Trade 1937). At the time this was strongly disputed by PEP. Its report on the location of industry (1939, pp. 56-7) correctly argued that decision making was constrained by the quality of information available, changing economic circumstances and personal business acumen. These concerns formed the basis of Allan Pred's 'behavioural matrix' (Figure 2.1), which classified entrepreneurs according to their ability to analyse data and the quality of the information available (Pred 1968). A position towards the bottom right indicates a good level of knowledge and ability to use it. Here there is a high probability of good locational choice. Knowledge and ability decrease towards the left of the matrix, where the chance of securing a good location is limited.

FIGURE 2.1

PRED'S BEHAVIOURAL MATRIX



O = optimal location

* = plant locations

The numbers 1 and 2 indicate the number of firms occupying specific positions in the matrix

Source: Pred (1968, p.92)

While the neo-classical model assumes that entrepreneurs have similar abilities, poor information can still trigger market failure. In these circumstances, the industrialist is placed towards the top right of the matrix. With inadequate knowledge, capital mobility will be restrained. Action to improve information flow will enable businesses to shift towards the bottom right of the matrix, increasing the probability that profitable sites will be chosen.

The basis of the neo-classical model is that well informed and rational decisions in labour and capital markets will secure the long term erosion of regional unemployment disparities. Accordingly, Britain's failure to achieve regional equilibrium is evidence of market failure and can be corrected by removing imperfections. Since the scope for market failure is greatest in the labour market, the largest burden of adjustment is placed on migration and the incentive structure. This means that a neo-classical approach is more usually associated with policies that move workers to the work. This is within the broadest possible traditions of British laissez faire economics, and found natural resonance with interwar legislators locked into pre-Keynesian thinking. But while interwar policy makers shared these neo-classical sympathies, the state remained aloof. This was because the government felt unable to become involved in wage bargaining, preferring to eschew corporatism in favour of limited tinkering with the welfare state. As a consequence the labour market remained unreformed, contributing to what was controversially termed a 'low-effort equilibrium' by Broadberry and Crafts (1990).

The interventionist view of regional policy is based on an entirely different concept of political economy. At the centre of this approach is the view that regional problems are caused by structural weaknesses and a fundamental deficiency of investment in the poor regions. In these circumstances market based solutions reinforce existing patterns and ignore the effects of externalities on wider economic and social domains. The link between individual self interest and the common good is broken, and governments are forced to impose solutions on entrepreneurs and workers. This view rests on a particular understanding of capital and labour markets, and it rejects conventional laissez faire thinking.

A key focus of Keynesian theory relates to different concepts of regional unemployment. The conventional typology distinguishes between four problems:

1. *Frictional unemployment*, where the search for jobs by unemployed workers and the search for workers by employers takes time.
2. *Structural unemployment*, where unemployed workers may not be able to fill existing job vacancies because they have the wrong skills or live in the wrong place.
3. *Neo-classical unemployment*, where wages are kept above their equilibriating level by trade unions or benefit payments
4. *Keynesian unemployment*, where jobs are in short supply because of a low level of aggregate economic activity.

In the neo-classical world, frictional, structural and benefit induced unemployment may be conquered by imposing market discipline. For *Spatial Keynesians*, this diagnosis is flawed. This is because poor regions are fundamentally disadvantaged and cannot compete for new investment and jobs. In these circumstances, regional unemployment differentials remain. The untrammelled application of market based solutions is rejected because of imperfect location decisions and the danger of economic and social externalities accruing. These externalities relate to the intensity of infrastructure use, agglomeration economies and congestion costs.

For example, the social capital hypothesis was one of the earliest rationales for intervention. In the 1930s, it was argued that acute economic distress and out-migration from Britain's peripheral regions would lead to increasing under utilisation of local infrastructure while generating unnecessary demands for new investment in the South (PEP 1939, p. 143). The result would be unnecessarily high social expenditure and a waste of public funds. One of the most startling examples of this was in interwar Coventry, where the local corporation struggled to provide housing and social services for a population which almost doubled between 1919 and 1939.[2]

[2] Thoms and Donnelly (1986, p. 24) report Coventry's population growing from 136,000 in 1919 to 220,000 in 1939.

The congestion argument is a partial extension of the infrastructure problem. Even in interwar Britain, commentators were aware that the concentration of activity in specific regions provided economic advantages for firms. These related to market proximity, agglomeration economies, reduced transport costs etc. Neo-classicists believed that these elements were internalised in the decision making process, providing an optimal distribution of industry. However, others argued that the South East and London were becoming so overcrowded that diseconomies of scale applied. These were both internally (extra freight traffic) and externally borne (e.g. pollution, travel to work costs), and indicated a fundamental market failure. The Barlow Commission was surprisingly forthright:

> It is not possible from the evidence submitted to us to avoid the conclusion that the disadvantages in many, if not in most of the great industrial concentrations . . . do constitute serious handicaps and even in some respects dangers to the nation's life and development, and we are of the opinion that definite action should be taken by the Government towards remedying them (HMSO 1940, p.195).

The behaviour of entrepreneurs is the second important element of the interventionist case. The argument here is that industrial location decisions tend to be imperfect because of both information problems and irrational judgement. In terms of Pred's behavioural matrix, this places industrialists towards the top left. It means that even if businesses were in full possession of the facts, they would still choose less than perfect locations. In the PEPs words (1939, pp. 21-22), 'The industrialist about to set up a new plant is primarily concerned with the facilities offered by competing sites. The subsoil and the drainage, the availability of raw material supplies and the distance from markets, the cost of the transport of goods, of fuel and of labour, the availability of satisfactory supplies of gas, electricity and water, the proximity of works engaged in allied processes - all these factors have to be looked into before one particular site can be chosen as the most suitable of those considered. In some cases few, if any of these factors will be made the subject of careful research'.

The PEP report foreshadowed the development of the behavioural industrial location school. This was an offshoot of organisational theory and psychology, and developed from the work of Greenhut (1956) and Pred (1968). Central to

their approach was a rejection of *homo economicus*. In his place we have individuals making decisions in the light of imperfect information and limited business acumen. Such individuals may still be acting rationally, but rationality may be defined in terms of non-pecuniary ambitions or targets. Once again, the interwar policy community was aware of these arguments, but theoretical rationales and empirical applications had yet to be established. It was this lack of empirical work which would hamper governments in their postwar attempts to confront leading industrial corporations.

The interventionist and free market perspectives employ markedly different concepts of political economy. For the former, salvation lies in enforcing solutions because market outcomes are undesirable. For the latter, untrammelled free competition secures the long term elimination of regional unemployment differentials. *A priori* one would expect the British Labour Party to favour an interventionist strategy. This is because its centre-left agenda supports the use of state power to alter market outcomes.[3] This is in contrast to the Conservative commitment to 'social market' solutions. Each philosophy embodies a different approach to regional unemployment, and each approach requires the use of different regional policy tools.

§2.3 Regional Policy Tools

An initial distinction can be made between micro and macro-policy options. The former are concerned with influencing the allocation of labour between economic activities and regions, the latter with changing regional income and expenditure (Vanhove & Klaason 1987, p.308). Macro-policy instruments can include devolution of trade and fiscal policy, regionally discriminating tax and expenditure plans (i.e. social security contributions, automatic stabilisers, government contract preference schemes for tenders from assisted-regions firms) or regionally

---

[3] The 1989 policy document *Meet the Challenge, Make the Change* made this point well:

> 'The market has a vital role to play, but it will not - left to itself - produce adequate investment in education and training, in science and technology, in new products and new capacity. The market will not reverse the short-term bias to favour productive strength in the long term. It will not secure equal rights of disadvantaged groups, *regional balance*, or a healthy environment' [emphasis added].

Quoted in Barberis & May (1993, p.9).

discriminating monetary policies. Micro-options centre on administrative controls, tax and subsidy schemes, migration policies and labour retraining.

Macro-policy initiatives are more widely associated with federal political systems. For example, in the United States and Canada local governments enjoy limited fiscal freedom. By contrast, British economic power is extremely centralised (Armstrong & Taylor 1993, p.306). This does not mean that macro-policy cannot regionally discriminate, but it makes planning and implementation much more difficult.

But even without an appropriate institutional structure, UK macroeconomic policy provides a regional effect (Blake 1995). Automatic stabilisers raise demand in low income regions and reduce demand in wealthy areas, competitive tendering works through existing industrial structures, while defence expenditure supports peripheral communities. But this falls short of the systematic planning associated with regional policy. In the words of Armstrong and Taylor (1993, p.313), 'too often . . . policy makers are simply not sufficiently aware of the regional effects of their decisions'.

However this thesis is concerned with microeconomic measures. While their effects are easier to discern, they are also a much more visible political statement. Relevant tools here include labour and capital reallocation schemes.

Labour reallocation schemes target geographical and occupational mobility. Transfer policies aim at inducing a shift in the supply of labour between regions, while *in situ* mobility policies aim at increasing the occupational and industrial movement of labour at existing locations (Armstrong & Taylor 1993, pp. 224-25). Practical policy weapons include occupational retraining, relocation subsidies, and the encouragement of local collective bargaining.

Capital reallocation programmes represent a different philosophy. Their principal aim is to move jobs to the workers. Unlike labour based policies, this can engender both competitiveness and multiplier gains. This can be done by using restrictive controls and/or financial incentives. In general, incentives should compensate a region for its poor economic attractions. Payments could fall into nine categories (OECD 1976, p.97):

1. Grants for equipment plant and machinery.
2. Provision of factory buildings and development sites at low cost.
3. Loans at market or specially favourable rates of interest, as a contribution towards capital costs.
4. Reduced taxation on profits over a period.
5. Favourable rates of amortisation of capital expenditure for tax purposes.
6. Favourable tax treatment of revenue from state aids.
7. Reduction or elimination of state charges, local taxes, licence fees etc.
8. Alleviation of certain costs, e.g. social security contributions and transport charges, where these are within state control.
9. Grants towards labour costs

An alternative way of encouraging industrial migration is to penalise firms in affluent regions. This can be done in various ways, the most obvious being a congestion tax. But a surcharge in a developed area has the same real effect as an incentive in a backward zone. Both confer a comparative advantage on peripheral regions, and both operate through financial media.

A more straightforward approach is to impose controls on the location of *new* industrial or commercial capacity. These controls might be used in tandem with incentive payments. Controls could identify and extricate mobile projects, while incentives guide them to new locations. Controls have the advantage of being cheap, flexible and easy to implement. Unfortunately, they run the risk of imposing inefficient locations on firms and reducing national investment.

Incentives and controls can either be discretionary or non-selective. Discretionary measures are generally more cost effective, but they force governments into 'picking winners'. This requires objective project appraisal and a large bureaucracy. Intervention is made more acceptable by developing a universal policy. This creates a level playing field and shields individual decisions from legal and political challenge.

The various microeconomic policy tools may be categorised according to the market failures they address and the media they use in operation (Table 2.1). The definitions of market failure employed follow conventional economic theory, with distinctions between externalities, irrationalities and friction/immobility. In each case 'principal' failures have been identified, although it is often difficult to

discriminate between categories. Thus administrative controls can override market signals to account for externalities, but they might also be applied to counter irrationality or friction and immobility in industrial relocation. The divisions are often questionable and the table indicates where elements of doubt remain. But despite these limitations, the table makes two important points. These centre on the location of market failures and the methods of correction.

TABLE 2.1

MICROECONOMIC REGIONAL POLICY TOOLS

Instrument		Principal Market Failures Addressed	Medium
POLICIES TO REALLOCATE LABOUR:			
Migration policies	a) subsidies to cover cost of moving	Friction/immobility	Market (1)
	b) coercion	Friction/immobility; irrationality?	Command & Control (1)
Mobility policies	a) improved flows of information to migrants	Friction/immobility	Market
	b) housing help, policies to ease house sale/purchase	Friction/immobility	Market
Labour market policies	action to improve efficiency of labour markets	Friction/immobility	Market
POLICIES TO REALLOCATE CAPITAL:			
Taxes & subsidies	a) input subsidies	Externalities	Market
	b) taxes on firms in prosperous regions	Externalities	Market
	c) output taxes/subsidies (export rebates, price subsidies)	Externalities	Market
	d) technology (R&D subsidies)	Externalities	Market
Policies to improve efficiency of capital market	e.g. loan guarantees, venture capital, exchange guarantees	Friction/immobility?	Market
Policies to improve the efficiency of operation of firms	e.g. advisory services	Friction/immobility?	Market
Administrative controls	planning licences	Externalities, irrationality?	Command & Control

(1) Market mediated instruments alter market signals to adjust outcomes. Command and Control decisions use no intermediary agents to change economic behaviour and often override market signals.

In the former case, the analysis confirms that capital reallocation policies tend to be associated with structural problems and an interventionist agenda. Conversely, the neo-classical view focuses heavily on labour reallocation policies. While this distinction is quite clear, it is also obvious that market based remedies dominate the policy media. In other words, it may be possible to correct many failures without resorting to mandatory control. This is important because market based solutions enjoy certain benefits over regulatory instruments.

In the first place, effective regulation requires a substantial degree of economic intelligence. In principle, any given distribution of industry might be achieved by administering a system of investment controls. However, taxes and incentives could also be used to provide financial incentives for footloose firms. Under a regulatory system, administrators will find that the costs of industrial relocation vary between firms. This means that flexibility will be required from the regulators. This flexibility demands a detailed understanding of production and distribution costs. But a system of taxes and incentives means that the authorities do not need to gauge the responses of individual firms to secure economically efficient outcomes. While a tax in a congested region will make it unprofitable for firms with low relocation costs to continue *in situ*, firms heavily dependent on existing sites will still find it profitable to remain. The market mechanism therefore ensures a degree of discrimination between companies.

The second major drawback of non-market solutions is the possibility of regulatory capture. Here the parallel with the environmental policy literature is striking. As McKay *et al* note (1990, p.4) 'Because regulators need to understand their industry in great detail to set sensible pollution targets, there is a tendency for the regulators to become too closely identified with the interests of the industry itself, rather than operating for the general interest . . . In contrast taxes are relatively immune from the effects of special pleading by particular firms, because one tax rate applies throughout an industry'. In terms of British location policy, this is precisely the danger faced by the Board of Trade from 1945-64. In later chapters we will see how, time and again, individual companies were able to circumvent location controls by effective lobbying.

However, the drawbacks of using market mechanisms should not be ignored. If we take the example of a location tax, it is clear that a potentially expensive administrative structure would be needed to police the system and collect revenues. Secondly, appropriate tax rates would have to be established, and this would require detailed knowledge of costs and relocation expenses - precisely the kind of information that is supposedly unnecessary in the absence of regulatory instruments. Finally, if decision makers continued to act in an irrational manner, there is no guarantee that market signals will affect behaviour.

The final policy profile will reflect these practical and philosophical concerns. But it will also reflect the policy trade-offs and contradictions inherent in a pluralist society with distinct policy networks and communities. These trade-offs and contradictions are the subject of chapters four, five and six, but for now we pause to outline the nature of Britain's policy regime, and to ask whether the left/right stereotype outlined in §2.2 accords with behaviour elsewhere in Europe.

§2.4 British Regional Policy: a comparative analysis

A simple working guide for policy analysis is provided by Hansen *et al* (1990, p.2). They argue that no policy should be considered regional, even if it has an impact on the distribution of economic and social phenomena in space, unless it is part of a formal effort to do so, and unless that intention is clearly stated. According to this definition Britain's first regional policy measures were not introduced until the mid 1920s. Up to that point the state had not seen the need to devise a plan to deal with the spatial consequences of recession. The problem of joblessness was viewed in administrative terms, and the government concentrated its attention on the treatment and maintenance of the unemployed (Parsons 1986, p.5). High localised unemployment was perceived as less of a structural or regional problem, then as a symptom and casualty of world recession.

The first measures were *ad hoc* and designed to prop up communities until general economic recovery could intervene. The earliest instance was in 1926, with training schemes for the unemployed established at Claydon, Brandon, Birmingham and Wallsend. In January 1928, this policy was institutionalised when the Ministry of Labour appointed the Industrial Transference Board '. . . for the

purposes of facilitating the transference of workers, and in particular miners, for whom the opportunities of employment in their own occupation are no longer available'.[4] Labour camps, social service centres and land settlement were also promoted, but these were supplementary to the main strategy of encouraging labour mobility. This approach was orthodox in as much that it relied on the market mechanism of labour movement between regions and industries. It was only when the slump deepened and national unemployment rose, that the limitations of these tools became clear.

As the country headed into secular depression, the pressure on the Government for further action became intense. A variety of damning industrial and area surveys were completed. The most important of these was published in 1934 as *Reports of Investigations into the Industrial Conditions in Certain Depressed Areas.* The series comprised of four papers, and described extreme regional distress that remained immune to government initiatives and 'natural economic forces'. One report concluded that the depressed areas, '. . . can only escape from the vicious cycle, where depression created unemployment and unemployment intensified depression by means of some positive external assistance' (McCallum 1979, p.4). The government responded with the Unemployment Act of 1934 which replaced the Poor Law and attempted to place the relief of poverty 'outside party politics' (Parsons 1986, p.12). But this failed to diffuse the growing political pressure, with a media campaign allowing Labour and Liberal politicians to keep debate alive.

Under mounting pressure, the government passed the Special Areas (Development and Improvement) Act 1934. Four Special Areas were designated, and two commissioners were appointed to administer the legislation. At first, the Commissioners had few resources and found their actions curtailed by official indifference. Accordingly they were restricted to sewerage and resettlement schemes (Dennison 1939, p.162). But in 1936, loan capital was made available for small businesses in the Special Areas through the Special Areas Reconstruction Association. The 1937 Special Areas Act empowered the Treasury to give loans to larger businesses, and it also allowed the Commissioners to make contributions towards taxes, rent and rates. However, by the outbreak of war, only £2 million

[4] Quoted in McCallum (1979, p, 3).

worth of loans had been sanctioned, with a mere £50,000 paid towards taxes and rents (McCallum 1979, p.5). The most successful measure was the provision of Trading Estates. By 1938, government built factories were employing around 12,000 people, although this was closely associated with the nation-wide rearmament programme.

The defining moment for the British regional policy debate came with the appointment of the Royal Commission on the Distribution of the Industrial Population in 1937. This was a response to failings in the existing market oriented policy highlighted by disaffected Special Areas Commissioner Sir Malcom Stewart. Throughout the Commission's hearings, the intellectual battle over state intervention was rehearsed in meticulous detail. On one side, Dennison noted how the Board of Trade supplied the 'classic' statement of belief in the efficiency of the market. On the other, witnesses from the Ministry of Labour implicitly supported state intervention, noting that 'The immediate economic interest of a given manufacturer is not necessarily a national economic interest' (Dennison 1939, p.33).

The report favoured a mixture of redevelopment, decentralisation and dispersal, aiming to alleviate congestion in the South and South East while securing a balanced distribution of industry in the rest of Britain. But in both the final recommendations and dissenting memoranda, a clear distinction had been made between the national position and private industrial interests. As a whole, the Commission was in sympathy with the idea of concerted intervention. But the report also included commitments to safeguard 'the conditions of successful industrial growth'. In a key section, the Commission argued that:

> . . . there is no reason to suppose that, so far as the profitability of industrial enterprise is concerned, the State, if it should take on itself unduly wide and autocratic powers or regulation and control of industrial location will be likely in general to prove any wiser, or to make more far sighted and enlightened choice, from the point of view of industry, then the generality of those who guide individual undertakings (HMSO 1940, p.192).

The existing literature suggests that the exigencies of war allowed the interventionists to triumph, paving the way for the Employment White Paper and important Distribution of Industry (1945) and Town and Country Planning (1947)

legislation (e.g. Booth 1982). This established a framework of negative controls (Industrial Development Certificates) and financial incentives which betrayed a peculiarly British trait.

This trait relates to the argument by Young and Lowe (1974) that while British governments tend to equate microeconomic success with commercial independence, they continue to intervene in the private sector to secure a balance of macro-social benefits. This means that governments have become involved in a delicate balancing act, playing off commercial autonomy against collective interests. Young and Lowe (1974, p.208) argue that the British government's reluctance to overrule the wishes of the firm has meant that 'basic economic problems' have remained uncontested, while the state seeks to influence businesses through persuasive arguments. The regional policy legislation of the late 1940s created a system in which these contradictions were given free rein.

The combination of the 'stick' and 'carrot' dominated regional policy administration until the mid 1970s (Table 2.2). Although governments wavered in their commitment to regional planning, the basic instruments of sanction and incentive remained in force. As policy strategy changed over these years, it was the balance between controls and incentives which caused the greatest controversy. But while the British debated the symmetry of their regime, only one other European country openly sanctioned controls; France. Yet even here, intervention was based on a different form of enforcement.

TABLE 2.2

THE MAIN INSTRUMENTS IN UK REGIONAL POLICY, 1928-83

Year	Legislation	Major Provisions
1928	Industrial and Juvenile Transfer Schemes	Minor grant and loan assistance for unemployed migrants.
1934	Special Areas (Development and Improvement) Act	Four Special Areas designated. Commissioners had power to grant loans. Led to the establishment of trading estates. Powers extended in 1937.
1945	Distribution of Industry Act	Special Areas extended and designated as Development Areas. The wartime building licence control was kept. Grant and loan powers vested in the Board of Trade.
1946	Resettlement Scheme	Wide range of migration costs met for workers in all regions. Replaced by Resettlement Transfer Scheme in 1962.
1947	Town and Country Planning Act	Introduced the Industrial Development Certificate (IDC) control. All new manufacturing establishments or extensions over 5,000 sq. ft. required an IDC. Exemption limit altered frequently after 1947.
1950	Distribution of Industry Act	A further extension to loan and grant powers for firms moving to Development Areas.
1951	Key Workers Scheme	Assistance to key workers moving with their firms to Development Areas.
1958	Distribution of Industry (Industry Finance) Act	Extension of loan and grant assistance to areas of high unemployment outside Development Areas. Tightening of location controls.
1960	Local Unemployment Act	Development Areas replaced by Development Districts delimited on basis of unemployment rates exceeding 4.5%. Strengthening of Board of Trade powers. Introduction of standard building grants. Reform of Industrial (Trading) Estates policy.
1963	Budget	Free depreciation introduced for firms in assisted areas.
1964	Regional Planning	Regional Economic Planning Councils and Boards set up by Department of Economic Affairs. Board of Trade loses responsibility for regional policy.
1965	*Control of Office and Industrial Development Act*	Control of office development in London and Birmingham with Office Development Permits.
1965	*Highlands and Islands* Development *Act*	Established the Highlands and Islands Development Board. Extensive powers of loans, grants and equity participation.

1966	Industrial Development Act	Development Districts replaced by Development Areas. Free depreciation replaced by differential investment grants.
1967	Finance Act	Manufacturing firms in Development Areas could reclaim payments made under Selective Employment Tax and were entitled to the Selective Employment Premium and the Regional Employment Premium. SET and SEP withdrawn in 1970.
1967	Special Development Areas	Additional incentives in areas of greatest need. Rent free premises and additional building grants.
1970	Local Employment Act	Seven Intermediate Areas established with lower rates of assistance than Development Areas and Special Development Areas.
1970	Budget	Investment Grants replaced by accelerated depreciation in Development Areas.
1972	Industry Act	Regional Development Grants replace the accelerated depreciation differential. IDCs abolished in DAs and SDAs. Increase in other forms of assistance; selective help for industry under Section 7 of the Act.
1972	Employment Transfer Scheme	Resettlement Transfer Scheme renamed and strengthened.
1974	Regional Employment Premium	REP doubled.
1975	Development Agencies	Scottish and Welsh Development Agencies established. Powers to finance factory building and to invest in industrial projects.
1977	European Regional Development Fund	ERDF established to help depressed areas. Investment grants and interest rebates on other Community loans for industrial, craft, service and industry projects.
1977	Regional Employment Premium	REP abolished.
1979-83	Phased reform of GB regional policy	Major package of reforms: planned cut in regional budget, redrawing of assisted area boundaries, Office Development Permits abolished, Industrial Development Certificates abolished, Regional Development Grants abolished in Intermediate Areas.
1983	White Paper on Regional Industrial Development	Sets out proposals for major reforms and invites public discussion.

Source: Armstrong & Taylor (1993, pp. 363-68); Marquand (1980, p. 20).

French postwar controls had been introduced to tackle industrial development in the Paris basin and to encourage relocation to depressed areas. Two instruments were involved, *Agrément*, which was a permit system introduced in 1955, and *Redevance*, a once and for all tax on new floor space. However, the first French

decentralisation measures had been adopted during the 1930s (Hansen 1968, p.54). These were dictated by military strategy and ran parallel to the British shadow factory scheme. It was not until 1950 that Cladius Petit, the Minister of Reconstruction and Urbanism, called for a national regional plan (Hansen 1968, p.55). By this time, Gravier's *Paris et le Desert Français* had set a distinctly French policy agenda. Gravier had described how Paris had monopolised industrial expansion - to the point were other regions faced structural decline. But legislation had to wait for a political imperative. This arrived in the 1952-54 recession, when regionally oriented staple industries collapsed and newer technologies rushed to Paris (Allen & Maclennan 1970, p.157). Between 1954 and 1957, a flood of laws was passed.

Both incentives and controls were introduced at the same time. Unlike Britain, policy arose as a complete package (Nicol & Wettman 1978, p.186). *Agrément* was designed as a flexible tool. Each application was to be treated on its own merits, and compensatory relocation schemes (package deals) were encouraged. A willingness to negotiate secured a favourable hearing, while systematic refusals were reserved for the belligerent. Many large firms entered into *Contrats de Localisation*, which detailed the terms of the deal with five or ten year investment plans (Nicol 1979). This policy was feasible given the good working relationship between government and industry.

Agrément has often been compared to IDCs. But there were significant differences (Nicol & Wettman 1978). First, IDCs were designed to divert all projects to the assisted areas. Where verbal persuasion failed, refusals were issued. Package deals were the exception rather than rule. *Agrément* was only refused where negotiations collapsed. Second, IDCs sought to divert firms to the assisted areas in general - they did not promote specific sites. *Agrément* had a much stronger directional element, with both 'push' and 'pull' roles. Finally, IDCs and regional incentives were administered separately. In France, decisions on *Agrément* and subsidies were linked through negotiation. The Government could therefore ensure that contentious schemes secured the maximum level of assistance.

While French decentralisation policy was clearly effective (Nicol 1979), the policy framework was substantively different from Great Britain. The French promoted

settlements and involved industrialists in a process of negotiated compliance; in the UK, controls were administered with nominally fixed decision criteria. It was only towards the early 1960s that the British started to emulate the French - a move made possible by a wide-ranging policy review.

Apart from France, two other countries flirted with some form of location control in postwar Europe. The Netherlands introduced legislation in 1971, with a Selective Regional Investment Bill. The act was designed to slow the growth of firms and offices in the congested *Randstad* region, whilst promoting a more even distribution of employment. The bill defined a mixed control, with both permit and fiscal elements (Nicol & Wettman 1978). The fiscal element was the selective investment levy, which applied to all new projects if building costs exceeded 250,000 guilders. The second elements was a *Rijmnond* building licence, covering extensions and new projects costing more than 1 million guilders.

As in the British case, direct controls were only introduced after debate and experimentation. In the 1940s and early 1950s a 'work to the workers' strategy had been favoured. This was abandoned in the late 1950s, when regional concerns were overtaken by growth (Wever 1986, p149). Amidst boom conditions, industry became highly concentrated in the 'Rim-City' area (Amsterdam-The Hague-Rotterdam-Utrecht) (Hansen 1974). This generated labour shortages, housing problems and political disquiet. These problems had been foreshadowed in a 1956 booklet called *The West and the rest of the Netherlands.* Written by the Central Planning and National Spatial Planning Agencies, it became the Dutch Barlow Report. Like its British counterpart, it argued for a more balanced distribution of industry. In 1959, the government accepted that regional policy should 'aim not only at combating regional structural employment, but also at the dispersion of industry and economic activities' (Hendricks 1974, p.191). But the Dutch continued to uphold entrepreneurial freedoms, focusing on direct (premiums) and indirect (infrastructure) subsidies. It was not until the early 1970s that the problems of the *Randstad* - and The Hague in particular - were deemed serious enough to warrant administrative restrictions (Brown & Burrows 1977).

Once introduced, the Dutch measures had a chequered record. Delayed by the oil crisis, they were launched into an unfriendly environment. The fiscal element was

abandoned within eight months, while permit refusals reached just 0.5% (Nicol 1979, p.334). Part of the reason was a ruling which exempted renewal, replacement and extension works (Nicol 1979, p.335). The underlying cause was rising national unemployment, and the scheme was formally abandoned in the 1980s. As in many cases, regional policy became a luxury in times of widespread economic distress.

The Italian *Authorisation* policy faced very similar problems. Introduced in 1971, the measure applied to the whole country and to all manufacturing activities. Like the Dutch system, it was a mixed control, with both fiscal and permit elements. A refusal would block a project, but taxes allowed exemption or reversal (Cao-Pinna 1974). *Authorisation* was the 'stick' behind a package of subsidies and incentives. It worked within the *Contrattazione Programmata*, a system based on negotiation. The *Contrattazione Programmata* was itself part of the first National Economic Plan (Allen 1979, p.194) which addressed the long standing problem of the *Mezzogiorno*.

Italy had been wrestling with the *Mezzogiorno* question for some time. The area was plagued by poor physical geography and a lack of resources. For decades, these conditions permitted little more than subsistence agriculture. Postwar governments had focused on developing modern infrastructure, but this proved largely inadequate. Better results were achieved in the 1960s, when the state developed a battery of subsidies. State industry was also pushed South. An example can be found in the vehicle industry, where an Alfa-Sud factory employing 15,000 was built (Allen & Maclennan 1970, p.65). From 1965 to 1970, there was a co-ordination of projects under the National Economic Plan. Under this first plan, all central government agencies had to preserve fifty percent of investments for the South, and thirty per cent of goods contracts. In addition, the *Cassa*[5] was granted sweeping rights of expropriation and subsidy. Northern political resistance tempered these moves, but the 1971 'Law for the South' restored the bias. As well as *Authorisation*, the law devolved regional powers and

[5] The *Cassa per il Mezzogiorno*, the original instrument of investment policy.

increased levels of public investment. Thirteen billion dollars was allocated for infrastructure, including 21 'special projects' (Cao-Pinna 1974).

Unfortunately, *Authorisation* was not the success it was hoped for. In the period from 1972 to 1975, the policy issued just seven refusals, giving an approval rate of 97.3% (Nicol 1979). This was partly due to its redefinition as a project licence. This meant that firms could keep plans below exemption limits and follow a course of incremental expansion. Decisions also faced judicial challenges. This was because the *Authorisation* Bill had been framed as a decongestion measure. Legally, applications had to be examined in relation to the *proposed* location. Where *de facto* refusals were based on relocation 'potential', courts could intervene. Until 1979, every appeal brought was successful (Nicol 1979). However the real problem with this regime was that it was a fudge between a Socialist Ministry of Economic Planning, and a Christian-Democrat led coalition (Nicol & Wettman 1978, p.194). The original idea had been for permits in the north, with accompanying congestion taxes. Political log-rolling changed this into a simpler nation-wide planning fee. In this sense at least, ideological differences dictated policy profile.

This brief survey of European disincentive policies serves to illustrate the novelty of Britain's regional policy regime. While many countries adopted development incentives, very few combined these with a negative location control. Moreover, when legislation was introduced, it was often ineffectual and delayed. The closest parallels are found in France, but there were significant differences between French and British practices. In particular, a penchant for open negotiations meant that the French tailored individual settlements to individual conditions. As we shall see, British legislation attempted to apply fixed decision criteria and preserve an illusion of scientific impartiality. This study will demonstrate that the Board of Trade was ill-equipped to execute such duties.

§2.5 Conclusion

Regional policy and regional policy tools may be characterised on a scale between market based and interventionist remedies. Market based initiatives rely on removing imperfections in labour and capital markets, while the interventionist

approach identifies fundamental flaws in market solutions and favours imposing solutions on entrepreneurs and workers. Regional policy intervention therefore requires a major philosophical judgement. Whatever policy is chosen, it will reflect fundamental beliefs about the efficacy of market forces and the legitimate role of state. It is this conflict that lies at the heart of the political economy of regional policy, and it was this conflict that the Board of Trade was forced to confront from 1945-64.

According to the literature, British legislation has been interventionist in scope, involving high levels of public expenditure and policies designed to reallocate capital and labour between districts (Parsons 1986, Armstrong & Taylor 1983; Scott 1996 etc.). Our contention, however, will be that while legislative activity has been interventionist, postwar policy administration was actually dominated by free market concerns.

3 The Industrial Context

§3.1 Introduction

The motor economy has helped define modern industrial practice. It has also dominated popular culture, becoming the ultimate expression of national and personal identity. But the auto-industrial complex is important in its own right. Its scale, employment and structure have made it one of the most dynamic industries of the twentieth century. As Landes (1969, p.443) made clear, 'in the language of development economics, no other product yielded so rich a harvest of forward and backward linkages'.

By delimiting 1945 to 1964 as the regional policy horizon, this study focuses on a unique period in British car making. Wartime restrictions gave way to two decades of merger and adjustment, culminating in massive investment in the early 1960s. This chapter will place these years into their economic and historical context. The discussion will be divided into five parts. §3.2 will focus on the industry's economic significance, while §3.3 considers long run trends. Demand and supply factors will be examined in §3.4 and §3.5, before §3.6 relates the analysis to the regional policy debate. A statistical appendix complements the discussion.

§3.2 The Economic Significance of the Motor Industry

In the last twenty years, the motor industry has experienced a profound transformation crisis. Plant closures, mass redundancies and industrial unrest have paralleled a wider despondency affecting British manufacturing. But cars have always made news. The wildcat strikes of the 1970s, Jaguar's 'kidnap' in the 1980s, and Rover's renaissance in the 1990s have all enjoyed front page coverage. This fascination is part cultural, and part pecuniary. While cars personify success and freedom, they also provide jobs and exports. They head a vast industrial complex whose significance is best appreciated in terms of linkages, employment and foreign earnings.

Like most industrial processes, car making is largely an assembly operation. Individual components and sub-assemblies are combined to produce an integrated whole. Under postwar conditions, over two thousand firms may have supplied items for any one vehicle, and each car could contain up to 20,000 individual parts (Waymark 1983, p.66; Dunnett 1980, p.18). Since both suppliers and assemblers have additional material, industrial and service requirements, 'car-making' extends its influence beyond the obvious boundaries. In short, the multiplier effect is substantial.

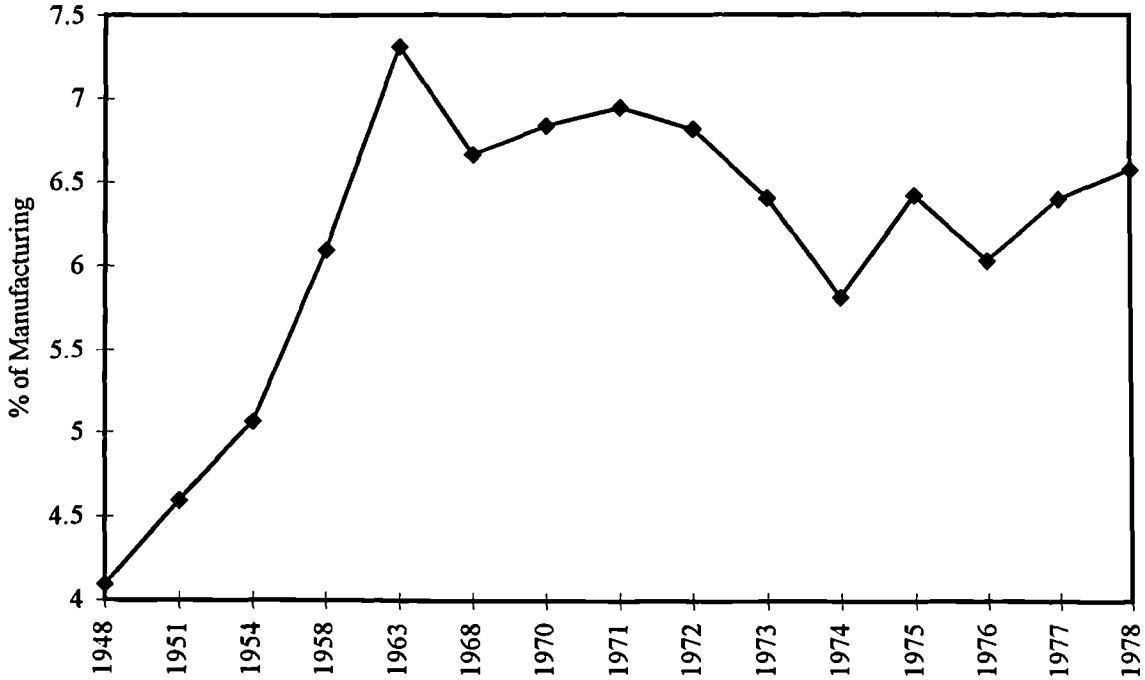
Nevertheless, the Census of Production attempts a direct measure of industrial structure. The Statistics of Trade Act (1947) committed the British government to an internationally recognised *Standard Industrial Classification*. These definitions were subsequently revised in 1958, 1968, and 1980. The Business Statistics Office put postwar data on a consistent basis in 1978 (HMSO 1978). Under the 1978 regime, the motor industry is defined in terms of Minimum List Heading 381 - Motor Vehicle Manufacturing.[1]

If we begin with Gross Output in Table A3 (p.284), we can see that although manufacturing output grew steadily up to the early 1970s, the share of the motor industry rose at a greater rate. This proportion peaked in 1963 at 7.3%, when motor manufacturing was the eighth most important industrial activity in Britain (CSO 1964, p.138). Despite the problems associated with successive OPEC price shocks in the 1970s, this share never fell below 5.8% (Figure 3.1).

[1] See appendix.

FIGURE 3.1

GROSS OUTPUT OF THE MOTOR INDUSTRY AS A PERCENTAGE OF TOTAL MANUFACTURING OUTPUT



Source: HMSO (1978), CSO (1981, 1988)

CSO figures also show that the motor industry has been a major consumer of capital goods. It accounted for as much as 8.5% of capital expenditure and 11% of all new manufacturing building during regional expansion in 1963 (Table A5, p. 286). These shares weakened a little in the mid 1970s, but recovered thanks to restructuring and rationalisation schemes (Figure 3.2).

FIGURE 3.2

CAPITAL EXPENDITURE IN THE MOTOR INDUSTRY AS A PERCENTAGE OF CAPITAL EXPENDITURE IN MANUFACTURING INDUSTRY

Source: HMSO (1978), CSO (1981, 1988)

While these measurements are useful, they take little account of the complexity of inter-industry links. Minimum List Heading 381 was designed to be both restrictive and exclusive. As such, it merely hints at the scale of motor manufacturing. Input-output analysis recognises this shortcoming, and it allows a much more comprehensive picture of economic linkages to be drawn.

Although several earlier semi-official estimates were published, the British government's first input-output tables were for 1954.[2] In comparison with later efforts, the data was primitive. But for the first time, economists were able to study linkages in depth. To demonstrate the technique's flexibility, a table was produced showing the direct and indirect requirements of motor manufacturing (reproduced exactly in Table 3.1).

[2] For the first of input-output tables in Britain, see Barna (1952).

TABLE 3.1

REQUIREMENTS PER £100 OF FINAL OUTPUT BY THE MOTOR AND CYCLE INDUSTRY, 1954

Industry Group	Direct requirements (£)	Indirect requirements (£)	Total requirements (gross)[1] (£)	Total requiremen (net)[2] (£)
Agriculture, forestry and fishing		0.1	0.1	0.1
Coal mining	0.3	2.4	2.7	1.9
Other mining and quarrying		0.5	0.5	0.2
Coke ovens and coal tar products	0.1	1.5	1.6	0.3
Chemicals and dyes	0.7	1.3	2.0	0.9
Drugs and Perfumery				
Soap, polishes etc.		0.1	0.1	
Mineral oil refining	0.2	0.5	0.7	0.1
Oil and greases	0.1	0.3	0.4	0.1
Paint, plastics and materials	1.7	0.4	2.1	0.8
Iron and steel-melting, rolling and castings	11.9	3.8	15.7	6.4
Iron and steel - tin plate & tubes	0.5	0.5	1.0	0.3
Non-ferrous metals	3.5	1.7	5.2	1.6
Motors and cycles		0.4	100.4	42.7
Aircraft	0.2	0.1	0.3	0.2
Railway rolling stock etc.	0.1	0.4	0.5	0.2
Shipbuilding and machine engineering	0.1	0.2	0.3	0.1
Mechanical engineering	4.5	1.6	6.1	3.4
Electrical engineering (general)	3.0	0.6	3.6	1.8
Radio and telecommunications	0.5	0.6	1.1	0.5
Hardware and hollow-ware	2.4	0.7	3.1	1.4
Precision instruments, jewellery.	0.2	0.1	0.3	0.2
Miscellaneous metal manufacture	5.8	0.8	6.6	2.9
Cotton and man made fibres	0.4	1.1	1.5	0.6
Woollen and worsted	0.1	0.2	0.3	0.1
Hosiery and lace				
Other textiles	0.7	0.4	1.1	0.4
Textiles finishing and packing		0.2	0 2	0.1
Leather and fur	0.3	0.1	0.4	0.1
Clothing	0.1	0.1	0.2	0.1
Boot and shoe				
Cereal foodstuffs		0.1	0.1	
Other manufactured foods				
Drink and tobacco		0.1	0.1	
Timber and furniture	1.5	0.4	1.9	0.7
Paper and board	0.3	0.7	1.0	0.4
Printing and publishing	0.1	0.6	0.7	0.4
Rubber	4.2	0.3	4.5	1.7
China and glassware	0.5	0.2	0.7	0.4
Building materials	0.1	0.5	0.6	0.2
Miscellaneous manufactures	0.6	0.3	0.9	0.4
Building and contracting	0.3	0.7	1.0	0.5
Gas and water	0.3	0.6	0.9	0.4
Electricity	0.6	1.1	1.7	0.8
Services	9.1	8.8	17.9	13.2
Public Administration				
Imports	2.0	8.6	10.6	10.6
Sales by foreign buyers		0.5	0.5	0.5
Taxes on expenditure *less* subsidies	0.4	1.8	2.2	2.2
Gross domestic income	42.6			
Total	100	-	-	100

Notes: [1]In terms of gross output.
[2]In terms of net output (*plus* depreciation).

Source: (HMSO 1964, p.11)

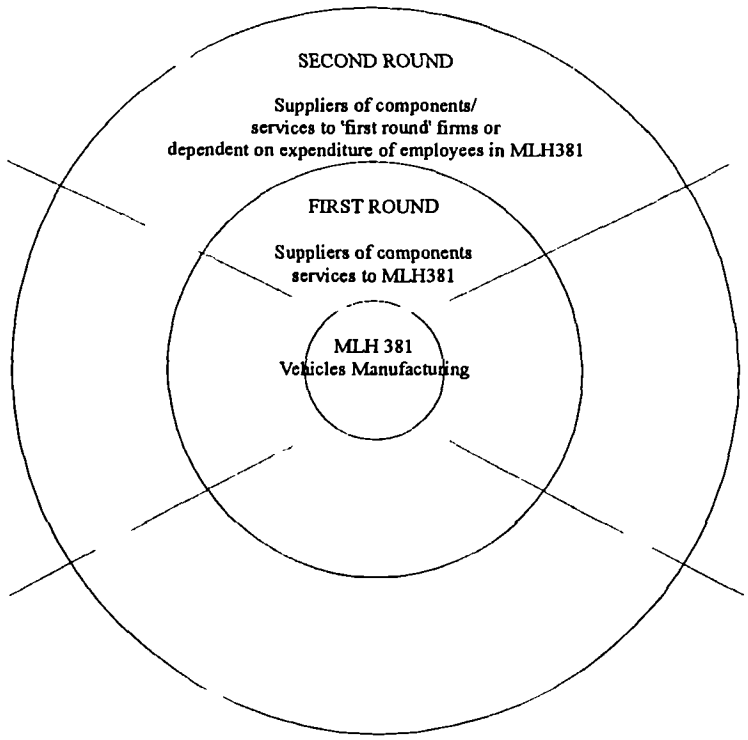
Table 3.1 underlines the importance of postwar car making. If one takes the motor industry's 1954 gross output of £882.5m from Table A3, we can see that motor building required £138.5m worth of inputs from the Iron and Steel sector; £23.8m of coal products; £18.5m worth of paint and plastic materials, and £15m of electricity. In constant 1985 prices, these figures would equate to £1319m, £226m, £176m, and £142m respectively.

A. G. Armstrong used input-output analysis in a landmark article published in the *District Bank Review* (1967). He estimated that in terms of all industrial inputs in 1963, the motor sector directly accounted for 5.1% of production. A further 5.5% of output was indirectly linked to car making. So overall, the motor industry accounted for 10.6% of industrial activity. The addition of capital items brought the share up to 12%, while Armstrong went on to attribute 32% of industrial growth from 1953 to 1964, to vehicle manufacture. According to these statistics, if the motor industry's output were to fall by 6%, then total economic activity would have been reduced by 2% (Rhys 1972, p.373). Further studies, completed during a parliamentary investigation in 1974, indicate that 7-8% of GDP was connected to the motor sector at that time (HMSO 1975b, p.31).

Employment statistics give these figures a human dimension. In terms of direct employment (MLH 381), some 501,700 people made cars in 1974, representing 6.5% of manufacturing employment (Table A4. p.285). Again, this share had been climbing throughout the post war period, peaking at 7% in 1979. The industry's subsequent run-down is well chronicled in the data. Lean production methods and rationalisation cut the workforce to 261,000 in 1986, outpacing the more widespread reduction in industrial employment. But this is only half of the story. For every line worker, a supporting infrastructure was required. In diagrammatic terms, the situation was simple (Figure 3.3):

FIGURE 3.3

EMPLOYMENT AND THE MOTOR INDUSTRY



Source: (HMSO 1975b)

In practical terms, measurement of these wider effects has proved almost impossible. Crompton *et al*'s (1976) abortive efforts were typical, while some of the best estimates come from Stoney and Bourn's (1984) eight year study of Merseyside. This computed the following dependency figures:

TABLE 3.2

EMPLOYMENT IN THE MERSEYSIDE MOTOR INDUSTRY, 1984

	No Employed
Direct Employment (Halewood, Ellesmere Port, Speke).	24,570
Local Suppliers	176
Merseyside Dependence	24,746
Other Suppliers	13,000
UK Dependence	37,746

Source: Stoney & Bourn (1984, p.39)

This study yielded a ratio of 1:0.54; in other words, for every one job in motor manufacture, 0.54 additional workers serviced the industry. But even this was an underestimate,

> Our figures reflect, of course, only one arm of the Marshallian cross, the supply side . . . We have not attempted a direct measurement of consumption multipliers and our employment impact figures are underestimates in this regard. . . £200 million worth of (wage) expenditure (including the proportion saved) could be expected to generate employment in terms of a few thousands rather than hundreds of people (Stoney & Bourn 1984, p.41).

The 1974/75 Parliamentary investigation was equally confounded. The Committee estimated 'first round' employment at 835,000 (510,000 in MLH 381, and 325,000 in supplying industries), with a further 435,000 in selling, repair and maintenance. But further measurements were abandoned. The final report concluded, 'The employment significance of the industry is increased by the multiplier effect. We do not wish to make a judgement on the correct coefficient to use, as we have not taken evidence on this point' (HMSO 1975b, p.16).

An exercise to correct these omissions would be helpful, but time consuming. For the purpose of this study, it is enough to hint at the scale of dependency. Car making is clearly a massive business, but so too is servicing, feeding, and clothing the production infrastructure.

This leads the discussion on to consider the international context. All of the major British car producers are now owned by overseas companies, while prestige brands like Rolls Royce depend on export sales. Cars are international commodities, and the multinational nature of the industry has helped to make it one of Britain's most important export earners.

In terms of units, the industry maintained a positive trade balance up to 1976, contributing many millions of pounds to the current account. The various phases of trade contraction and expansion will be examined below, but Table A8 (p. 291) provides a neat summary. This shows that from 1952 to 1977 the motor industry consistently accounted for over one tenth of British exports. Within the 'regional policy horizon', this share topped 16% (1964), confirming the industry's key role in trading relations.

Two observations should be made on this point. Firstly, export strength has been related to the success of component makers. A legacy of Britain's engineering past, component firms won praise from both the Central Policy Review Staff (1975) and the Expenditure Committee. Of the top twenty companies in 1979, only six were foreign-owned (Wilks 1984, p.69). This sector would became increasingly uncompetitive in the 1980s, although a more recent report suggests a recovery of British fortunes (Carr 1990).

The second point cuts to the heart of this study. It is simply that motor exports have been so vital to Britain's balance of payments that the question of external balance has consumed other policy initiatives. In regional planning terms, governments have had to balance 'the proper distribution of industry' with the need for efficient manufacture. It is worth quoting the following passage from a briefing document prepared for Sir Peter Thorneycroft, President of the Board of Trade in 1954. The Board had been asked to approve new buildings for Ford and Vauxhall which ran counter to location policy. Sir Peter's advisors were adamant:

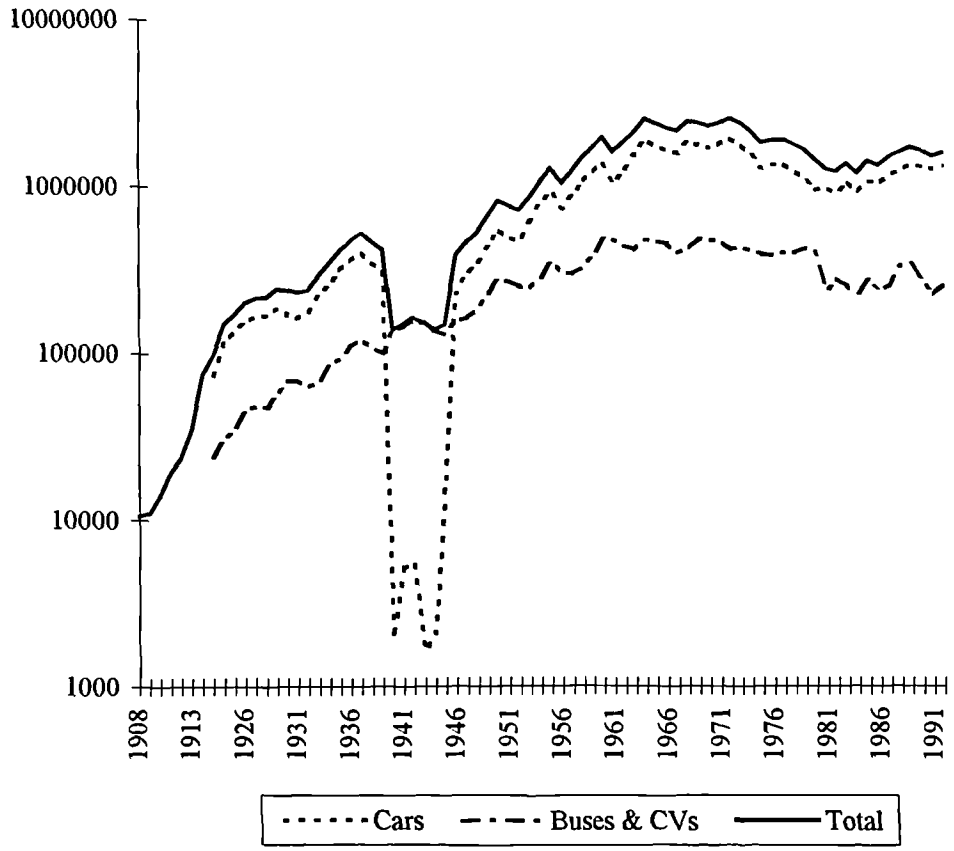
> It is felt that the importance of these two firms to the national economy is so great, and particularly to our current and potential exports of motor cars . . . that we cannot refuse any part of their proposals. This means in effect the

abandonment of the attempt to restrain the growth of central London, with which presumably would have to go the policy for the other congested areas. (PRO 1954c).

§3.3 Long Run Trends

The motor industry is the product of one hundred years of technical innovation and development. British production began in 1896, when the Daimler Motor Company established a factory in Coventry. In the early stages, basic engineering problems had still to be overcome, and a large number of makers experimented with design and specification. Many small firms were among the nearly 300 which entered the industry before 1906, most of them to retire defeated (Richardson 1977, p.55). Throughout these formative years, cars remained a novelty. The motor economy matured slowly, but its development became a corollary of wider manufacturing history.

FIGURE 3.4
UK MOTOR VEHICLE PRODUCTION, 1908-91



Source: SMMT (1939, 1991)

Figure 3.4 shows the growth of production in Great Britain. This graph traces the redefinition of the motor vehicle from a plaything of the rich before 1914, to a consumer durable and workhorse in post-Second World War Britain. The phenomenal growth in output mirrors a revolution in production technology which enabled costs to fall and new markets to be exploited.

The inspiration behind these developments came from the United States. At first, observers feared that America would be conquered by European manufacturers, but the fledging US industry was blessed by two advantages (Richardson 1977, p.62). Firstly, American per capita income was much larger than in Britain or France. Secondly, standardised production methods were already an established practice. Whereas Europe concentrated on hand-made vehicles, firms like Studebaker, Cadillac and Buick realised scale economies from long production runs (Rubenstein 1992, p.42). 'In short, high per capita purchasing power allied to low cost products and production methods meant the establishment of a large industry' (Rhys 1972, p.10).

Henry Ford mastered the American market. His philosophy was supply driven:

> The way to build automobiles is to make one automobile like another automobile, to make them all alike, to make them come through the factory just alike; just as one pin is like another pin when it comes from the pin factory, or one match is like another match when it comes from the match factory.
>
> You need not fear about the market. The people will buy them all right. When you get to making cars in quantity, you can make them cheaper, and when you make them cheaper you can get people with enough money to buy them. The market will take care of itself (quoted in Richardson 1977, p.65).

By the time Ford translated this approach to Manchester in 1911, the moving track assembly line had been born. New technologies and utilitarian designs allowed output to rise, and prices to fall (Table 3.3).

TABLE 3.3

MODEL 'T' - PRODUCTION AND (CURRENT) PRICES, 1908-14

Year	Production	Price ($)
1908	307	850
1909	10,607	950
1910	18,664	780
1911	34,528	690
1912	78,440	600
1914	248,307	490
1915	308,213	440
1916	533,921	360

Source (Wood 1988, p.22)

Similar techniques expanded British production. In 1924, Morris remarked, 'Until the worker goes to his factory by car, I shall not believe that we have touched more than the fringe of the home market' (Turner 1963, p.22). His factories concentrated on affordable and reliable cars. When faced with competition from the Austin 7 in 1922, he ordered a cut in prices. The gamble worked, and in 1925 Morris built 54,151 Cowleys and Oxfords - representing 41% of the country's production. This was the highest share ever attained by Morris, and it was unequalled by any British car maker in the interwar years (Wood 1988, p.38).

Despite these moves, interwar motoring remained a middle class preserve (Bowden 1991; Bowden & Turner 1991, 1993). While production rallied to 390,000 cars in 1937, the total number of vehicles in use barely topped 2.5 million. Two reasons account for this. One was the high cost of maintaining a vehicle, another was the Great Depression.[3] Morris' expectations could only be realised when the people's means matched their reach. This would happen in the unprecedented prosperity of postwar Britain. In the meantime, an army had to be provisioned.

[3]An SMMT survey in 1926 estimated a possible home market of only 835,000, based on annual income not below £450 (Richardson 1977, p.103).

If the Second World War was a GDP war, the motor firms were the economic shock troops. Factories were redirected to war production, and the shadow factory scheme - with all of its implications for industrial location - was introduced. Although there was very little car production, the production of military vehicles was increased. This put significantly better scale economies within the reach of British firms. New buildings and equipment would increase the interwar productive capacity by as much 60% for commercial vehicles and 20% for cars (HMSO 1975b, p.9). This investment programme allowed the larger firms to re-equip on a massive scale. When the war ended, it seemed that Britain was well placed to supply a greedy market.

Table A10 (p. 294) reflects the importance which the government placed on export production. In the face of the dollar shortage, the President of the Board of Trade, Sir Stafford Cripps, directed the industry to export at all costs

> . . . the motor car was seen not only as a thing of luxury and pleasure but the means with which the economy could be rebuilt. The car firms were no longer at the beck and call of fashion or economic recession, but were seen by policy makers as the wherewithal to economic recovery (Rhys 1972, p.379).

In order to spearhead this export drive, the home market was restricted by purchase tax, credit controls, petrol duty and rationing. Nevertheless, demand was still strong, and car makers were given further export inducements through the material allocations scheme. All of this meant that although the domestic market was distorted, output continued to grow apace. Manufacturers were given ample reason to invest in new capacity, occasioning mini-investment booms throughout the 1950s (Rhys 1972).

Despite potentially damaging cyclical disruptions (see §3.4), domestic output only really began to falter in the mid 1960s. From a peak of 2.5 million vehicles in 1964, the demand for British cars showed signs of terminal decline. The industry was wracked by industrial disputes and a series of protracted corporate take-overs. The 1970s would see rationalisation and retrenchment on a massive scale, before a modest recovery began in the 1980s. An indication of the industry's failing health can be seen in the closing gap between new registrations and output. Before the late 1970s,

Britain's annual production had always exceeded new registrations; from 1977 the situation was reversed. While exports fell, import penetration continued to rise.

In terms of exports, the postwar period held much promise for British car makers. In 1938 only 20% of output was exported, by 1951 this figure was 77%. In succeeding years, the proportion fell, with commercial vehicles following the same pattern. Export expansion was based on a number of factors: the pent-up demand for cars; the dislocation of European production; the priority accorded to exports; and rising real incomes (Central Office of Information 1977, p.5). During these years, British firms devoted considerable energy to the North American market, with the United States becoming the largest overseas purchaser of British cars in 1956.

Table A9 (p.292) shows Britain's trading record since 1948. Throughout the early postwar years, imports of motor vehicles were negligible. Quantitative restrictions and the Mckenna duties provided tangible barriers to trade. From 1955 to 1959, an average of 13,000 cars were imported, against annual exports of 440,000. One of the very few success stories was Volkswagen, who succeeded in selling 36,000 Beetles by 1960 (Nelson 1970, p.161).

During the 1960s Britain's position deteriorated. In terms of volume, the peak year for car exports was 1969, but export growth had been declining for some time. Strong competition in America cut into British margins, while sales in other areas stagnated. The simplest indicator of trading decline was the increase in import penetration (Wilks 1984, p.71). This is defined as new car imports as a percentage of total registrations, and stood at 7% in 1960, doubling to 14% by 1970 (Table A11, p. 295). But even this underestimates the sales loss. 1960 was itself an import peak, when foreign cars 'plugged' spiralling domestic demand (Rhys 1972, p.413). In 1961, conditions relaxed, and imports fell to a more typical 3.1%. In the space of a single decade, the Kennedy Round and EFTA had halved tariffs, while Britain's entry into the EEC promised free intra-European trade. In the words of former BBC correspondent Martin Adeney (1988, p.222), 'The protective fence which had allowed the British motor industry to

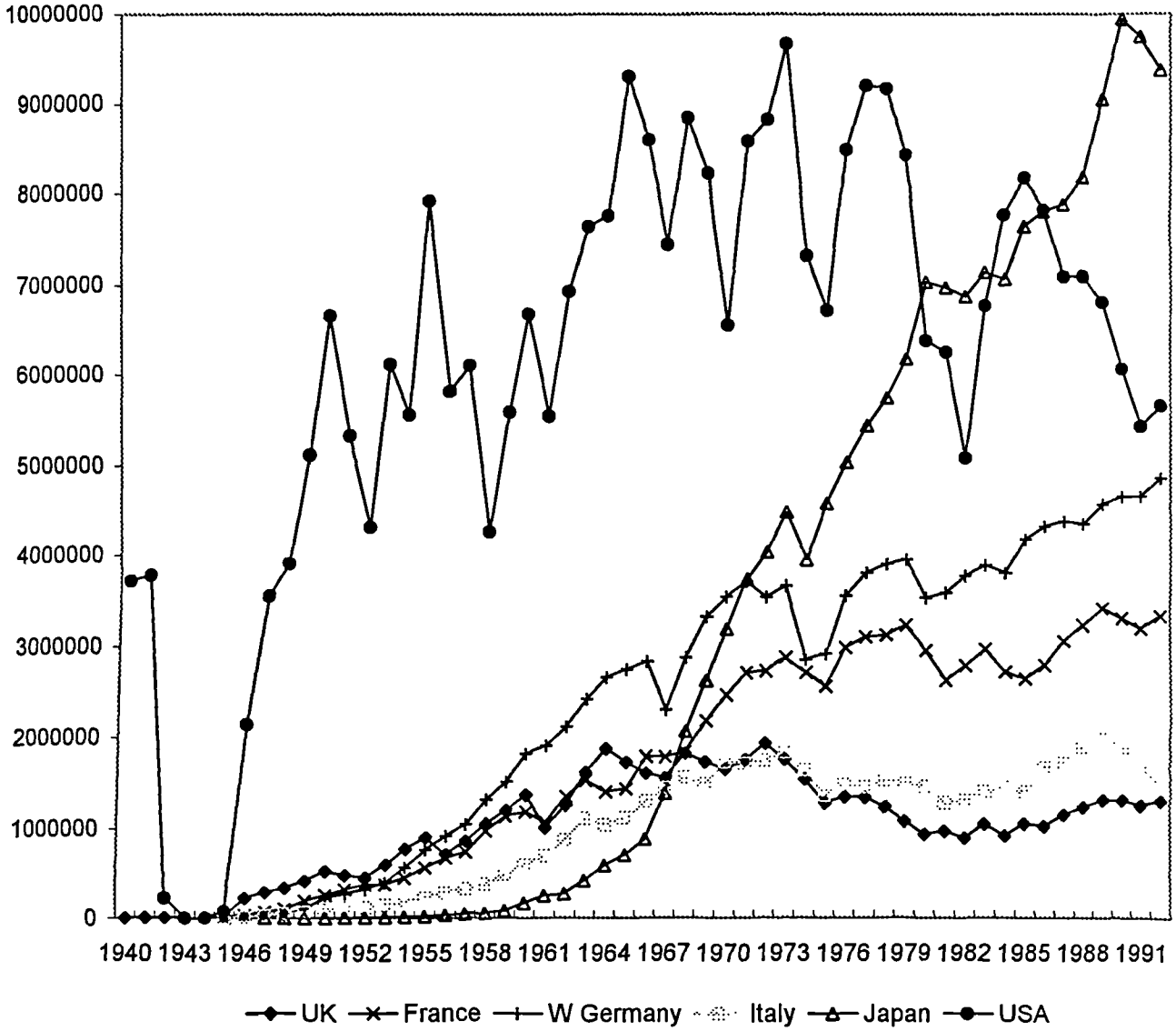
grow was being dismantled plank by plank, and the British manufacturers found it difficult to cope with the cold wind of competition'.

The 1970s saw these trends accentuated and prolonged. Although the British car industry produced a record 1.9 million saloons and hatchbacks in 1972, output fell for the next three years. Exports were also retarded - slumping below 500,000 in 1976. More significantly, imports increased year on year. Foreign cars accounted for 56.7% of all new registrations in 1980. All of this meant that the automotive trade balance moved into the red in 1977, where it was to remain for the entire 1980s.

Britain's demise as a volume car producer can be traced in Figure 3.5. This shows how first the Germans, then the French, and finally the Italians overtook British output. In terms of world production, the United States has maintained a dominant position. It was only in the 1980s that Japan's rapid growth outpaced Detroit.

FIGURE 3.5

CAR PRODUCTION BY PRINCIPAL NATIONS, 1940-92



Source: SMMT (1939,1991)

This graph can serve as an analogy for world economic history. Waning British power, postwar recovery and Western stagnation are all obvious trends. But the aggregate data conceal structural changes which are best understood in the context of growing corporate control.

In its early years British car making was marked by a large number of firms entering and leaving the industry. Up to 1913, 198 different makes of British cars had entered production, of which 103 quickly disappeared (Rhys 1972, p.9). There was even less success in commercial vehicle production, and Richardson's list of business failures (1977) underlines the frailty of early manufacturers. Nevertheless, rising postwar demand enticed many firms into the market. From 1919 to 1920, 40 new car producers appeared; with a further 46 entering the industry before 1925. But despite these statistics, interwar conditions favoured concentration rather than diversity

TABLE 3.4

MOTOR INDUSTRY PROFILE 1922-24

Year	No of Vehicle Producers	Predominantly Cars
1922	196	96
1923	119	41
1924	74	33

Source: Rhys (1972, p.12)

Rhys shows how the number of vehicle producers fell from 196 to 74. Of the 33 remaining car makers in 1939, the 'Big Six' controlled the market (Table 3.5). Nuffield, Ford, Austin, Vauxhall, Rootes and Standard accounted for 90% of car output, while 70% of CV production was controlled by three firms (Nuffield, Ford and Vauxhall). This concentration of production was brought about by internal expansion and the competitive elimination of other firms (Maxcy 1958).

TABLE 3.5

BRITISH VEHICLE PRODUCTION SHARES, 1929,1939

Year	Vauxhall	Standard	Rootes	Ford	Nuffield	Austin	Total
1929	1.1	4.9	-	5.7	51.0	37.3	100
1939	10.4	12.8	10.9	14.7	26.9	24.3	100

Source: Rhys (1972, p.307)

The significance of market concentration is explained by H.G. Castle, 'The concentration of interests in the Big Six made it difficult for individual manufacturers of new cars to enter the industry, and particularly for anyone who wished to make a cheap car'.[4] Technical economies of scale acted as barriers to entry. These same forces would provide the irresistible logic behind merger and agglomeration in postwar Britain.

After 1945, the six became five, and the five merged into four. Ownership passed from charismatic individuals like Billy Rootes and Herbert Austin, to faceless holding companies and foreign multinationals. On February 1st 1994, the last British volume manufacturer - Rover - surrendered control to BMW. It marked the end of a painful process whereby both government and industry had tried to preserve at least one indigenous producer.

Some of the key moments of postwar motor history were: the merger of Austin and Morris in 1952; Rootes' take-over of Singer in 1955; Jaguar's 1961 bid for Daimler, and Leyland's' capture of Standard-Triumph in the same year; the merger of BMC and Jaguar to form British Motor Holdings, and Leyland's take-over of Rover in 1966; Chrysler's assumption of majority control in Rootes in 1967; Leyland and BMH merging into BLMC in 1968; and finally Peugeot's buy-out of Chrysler in 1977. All of these episodes are well covered in the company histories, and the minutiae need not concern this analysis. What is important are the generalisations that can be made about company motives and economic consequences.

In most cases, mergers were negotiated from a position of weakness. Companies were forced into marriage because their scale of organisation could not compete with rivals. In the postwar period, this meant a counter to both GM and Ford, together with European-owned producers. By comparison, British firms were 'Second Division teams trying to play in the First Division' (Turner 1971, p.74).

---

[4] Quoted in Wood (1988, p.56).

The relevant production economies are examined by Dunnett (1980, p.23). His review of cost studies suggests that in the 1940s, ' . . .product economies of scale exceeded 150,000 units per year. In the 1950s, automatic transfer machines and unitary body construction had raised this figure, probably to above 500,000 units. In the 1960s this figure increased towards a million, and in the 1970s exceeded a million . . . In no year did any British company achieve sufficient production to exploit all potential economies of scale in production'. Other scale economies in areas such as marketing and research, imply savings at an even greater level. Dunnett (1980, p.25) concludes, ' . . . other things being equal, the more cars a manufacturer produced, the cheaper it became on a per unit basis. The larger a manufacturer, the lower would be his costs . . . and the stronger his competitive position'.

The 'big is beautiful' philosophy drove industrialists and policy makers alike. Businessmen like Alick Dick soon realised that smaller firms could no longer support mass production. The intervention of the Industrial Reorganisation Committee in December 1967 reflected a general opinion that the motor industry was too fragmented and that 'Britain needed to present one face to the world' (Turner 1971, p.113). The IRC would eventually underwrite the BMH and Leyland merger - providing a £25m dowry. For better or worse, Britain had entered the Leyland years.

The benefits of merger were never fully realised. In BMC's case, there was a rationalisation of major mechanical parts - engines, gearboxes etc. - but little else. The scattered collection of plants went unpruned, while early profits discouraged reform. BMC had inherited five marque names, (Austin, MG, Morris, Riley and Wolseley) and all were kept to exploit customer loyalty (Wood 1988, p.109). By 1959, no British car was being made in volumes of much over 100,000 per annum. Although output trebled to nearly 900,000 in 1960, the number of vehicles produced per employee rose little. Given the concentration on small car production - this was disastrous (Williams 1983).

So although vehicle output rose dramatically, company profits did not (Table A12, p. 296). In absolute terms, pre-tax returns never rose much above the £20 million level

which was achieved in 1957-8. In relative terms, BMC's performance was even worse. Ford constantly outpaced the British company, whilst Leyland's profit per vehicle dropped from £44 in 1952, to £24 in 1965/6 (Williams 1983, table 23).

The subsequent creation of BLMC in 1968 compounded these problems. Leyland's buyout was supposed to invigorate the British motor industry, instead the expanded company proved incapable of managing change. Product development proved difficult to co-ordinate, whilst the decision to concentrate on three new models - Marina, Allegro and Princess - precipitated collapse (Williams 1983, p.228). While Ford had a total of four plants and a highly integrated production strategy, BLMC's operations extended to sixty sites (Thoms & Donnelly 1985, p.203). The 'wonderful merger' proved a false dawn, and Stokes' words came back to haunt the corporation, 'You cannot take two large complex companies and put them together and reap the benefit. There is much planning, much rationalisation to do before the extra profits come in'. (Adeney 1988, p.251). In fact, as late as 1975 - seven years after merger - Stokes would admit that the company was, ' . . . still in the process of rationalisation . . . I doubt whether we could have done it any more quickly. It is easy to say that you should have fewer body shells and you should have fewer engines and so on. You do have to remember that you have plant laid down for these items, you do have a model selling in the market, and you cannot just chop them all off overnight' (HMSO 1975b, p.115).

Reading the history of car making, it is difficult to escape from Meeks' (1977) general conclusion that postwar mergers inhibited efficiency, and reduced profitability. But this does not mean that mergers were unwise. In many cases, the alternative to take-over was liquidation. Scale economies have simply remained beyond the reach of British manufacturers. Subsidy and nationalisation provided a temporary palliative in the 1970s, but foreign take-over has become the ultimate cure.

§3.4 Demand Factors

All firms try to anticipate market change. In a competitive world, survival can depend on demand appraisal. Vauxhall's submission to the Expenditure Sub-Committee in 1975 illustrated the complexities involved (HMSO 1975b), citing fiscal policy, transport policy, environmental policy, income levels, consumer taste and import penetration as important factors. Vauxhall's statement could be re-written in any number of forms, but the Dicks-Mireaux demand function illustrates the key relationships involved (Rhys 1972, p.224):

$$D_t = f(Y_t\ P_t\ h_t\ S_{t-1}\ t)$$

This makes aggregate new car demand (D) a function of per capita real income (Y), relative prices (P), hire purchase (h) conditions and a time variable (t). S_{t-1} accounts for the lag in adjustment from the present stock level to the desired level. However, the existence of a second hand car market complicates the analysis (Rhys 1972, p.225). Many people become car owners by buying second hand vehicles. Because new vehicles form a relatively small proportion of total sales - the rise in car ownership is heavily dependant on the used car sector. Most vehicles are sold by their original owners when still in running order. With increasing prosperity, owners 'trade-up' to newer, or more luxurious models. So except in a very few cases, new car demand is a replacement demand.

Since this section is concerned with new car production, the emphasis will be on Dicks-Mireaux type demand functions. We need to consider three elements - real income, selective economic controls and price elasticity of demand. Consumer preferences will be largely ignored, since the focus is on long term change and its relationship with government policy.

The first observation we can make is that cars are a normal good *par excellance.* Any change in income will normally produce a change in vehicle demand of the same sign. Postwar studies typically estimate an income elasticity of between 1.1 and 4.2 (Rhys 1972, p.228), although estimates vary according to the statistical techniques

employed.[5] A more recent study suggests a current income elasticity of approximately 1.7 in the United States (McCarthy 1996), while British studies suggest a figure within the range of 2.4 for the 1960s and early 1970s (Dicks-Mireaux 1961; Rhys 1972, p. 228; Armstrong & Odling Smee 1979a, 1979b).

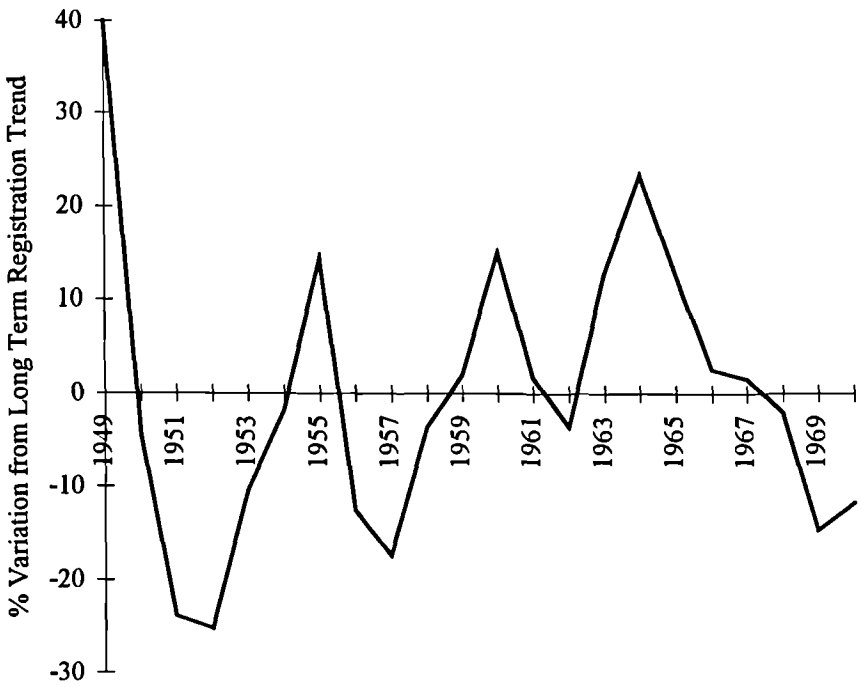
Among existing owners, rising incomes encourage early replacement and multi-car ownership. Recession breeds deferred purchases and falling orders (Economic Development Committee for the Motor Manufacturing Industry 1967, p.12). So in the basic demand function, disposable income is paramount. On some occasions, a time-trend appears equally significant, but ' . . . this is normally a combination of other factors such as tastes, population increase, and relative prices, the influence of which has changed systematically over time at a constant rate' (Rhys 1972, p.228).

From this discussion, it is clear that the demand for cars is closely related to a country's general economic performance. The recurrent pattern during the 'regional policy horizon' was bouts of rapid growth followed by enforced restraint. This 'stop-go cycle' can be seen in Figure 3.6, which captures annual variations from the long term trend of new registrations.

[5] See Cowling and Cubbin (1971) and Cowling and Rayner (1970). Madden (1988) provides an excellent discussion of the technical issues.

FIGURE 3.6

VARIATIONS FROM THE LONG TERM TREND GROWTH OF NEW REGISTRATIONS, 1949-70



Source: SMMT (various years), CSO (various years)

The history of 'stop-go' and the debate over its effects have been well rehearsed in the literature. In particular, controversy has centred on the amplitude and depth of the economic disruption compared with other Western economies (NEDO 1976, Whiting 1976, Prais 1981). While demand management was applied on a macroeconomic level, policy makers also targeted car builders with individual measures. This was because the sector was viewed as an ideal economic regulator. Postwar governments focused on four such instruments: purchase tax, hire purchase regulations, the Road Fund Licence, and petrol duties. Fuel taxation had been introduced in 1909, while a flat rate 'licence' had been payable since 1948. But hire purchase and purchase tax

proved the favoured weapons. The latter was introduced in 1940 at 33.33%, while HP restrictions began in 1952. Bowden and Turner (1993) demonstrate that these restrictions had a potent effect on the domestic market.

The 1960s illustrate the influence which general economic instability and selective measures can have on motor firms. After a record year in 1960 in which 1,353,000 cars were produced, output fell to 1,004,000 by 1961. Recovery in 1963 heralded a mini-boom which was to last three years. A revival of export markets and increasing consumer confidence enabled the motor industry to confidently expand into the regions. A relaxation of purchase tax and Maudling's 'Dash for Growth' were key elements.

1964 saw a Labour victory in the October General Election. At that time, there was growing pressure on Britain's foreign reserves, but the government's National Plan championed sustainable growth. In keeping with this, selective controls were resisted (Dunnett 1980, p.91). Although the Labour government refused devaluation, a credit squeeze and tax increase depressed car sales. An unavoidable hike in licence fees and HP restrictions also affected demand. Added deflationary measures in 1966 included a price freeze and a change in investment incentives. As *The Economist* noted, the 1966 motor show opened to a 'cacophony of complaints about government unfairness to Britain's biggest export industry' (Dunnett 1980, p.92).

Credit restrictions were finally relaxed in the summer of 1967. The respite was short-lived. In November, the pound was devalued, ending three years of 'miserable resistance' (Dunnett 1980). Post devaluation measures reduced domestic car sales from 1.3 million to 1.1 million (HMSO 1975b). Petrol taxes, car licences and credit restrictions were increased, whilst the 1968 budget cut aggregate demand by a further £975m. These measures were progressively tightened until 1969, when the industry operated at just 50% capacity.

It was only in 1972, that the NEDO made the long term costs of selective intervention and demand regulation explicit:

> The Government can introduce great uncertainty by its management of the economy. The motor manufacturing industry is peculiarly susceptible to government economic measures aimed at demand regulation, and therefore the risks involved in investment depends critically on an assessment of the future movement of the economy and of government measures. Investment plans conceived in the mid-sixties with expectations of steadily rising home demand based on the projected rapid growth of the economy were met with five years of stagnation in demand for vehicles, due primarily to (albeit necessary) government deflationary measures, and returns were accordingly well below expected levels. With this experience, companies are likely to take a cautious view of future trends, and weight the probability that a project will achieve the required rate of return accordingly. The greater the degree of uncertainty, the lower is the probability that a project will achieve the required rate of return: the number of projects which can meet the required rate of return falls, and the amount of capital expenditure is likely to fall. The Government can counter this by adopting policies which reduce fluctuations in demand for motor vehicles (HMSO 1975b, p.385).

The final factor affecting demand is the price of other goods. In a detailed study of car demand between 1952 and 1972, Hess (1977) has argued that substitution effects account for seven times more variation than income changes. This is because a change in the ratio between car prices and general consumer prices is equivalent to a change in real relative prices. But this has proved difficult to model. The effect of prices will vary according to individual patterns of expenditure: house prices affect owner-occupiers, but not directly renters; fuel prices affect households in different climates in different ways; food prices affect households according to the size and composition of the household etc. 'To take aggregate national statistics is probably to obscure much of this difference in the pattern of expenditure, and to obtain results which may only be valid over the data set actually calibrated' (Mogridge 1983, p.51).

Nevertheless, various studies have attempted the measurement. Results suggest a long-term cross elasticity of between -0.6 and -1.5. In general empirical studies find that around 80% (R^2=0.8) of demand variation can be explained in terms of income and price changes (Rhys 1972, p.228). As Rhys notes, other demand factors 'should be seen in this light'.

These and other findings help explain rising car ownership. But individual firms are less concerned with total demand, than they are with branded sales. While forecasters

want to anticipate market change, they also want to develop a competitive pricing and marketing strategy. Instances of short-term price competition have been rare.[6] But long-run 'model-price' competition is endemic. If a new car is priced too high, then sales will be lost to cheaper models in the same class. In 1970, the Hillman Avenger was pitched into the light medium sector £32 below the Ford Escort, £20 cheaper than the Vauxhall Viva, and £40 under the BLMC 1300 (Rhys 1972, p. 311). More recently, the Vauxhall Corsa deliberately undercut its Nova predecessor. But manufacturers must balance the benefits of market share against profits per unit. As BMC demonstrated, it is one thing to create a demand, quite another to profit from it:

> The Mini was a perfect expression of Leonard Lord's famous dictum, 'If you build bloody good cars they'll sell themselves' . . . But when it came to pricing the Mini the corporation made a disastrous error . . . For at £496 in its cheapest form, it was only £77 more than the archaic Ford Popular and was no less than £93 cheaper than Dagenham's completely new impeccably costed 105E Anglia, announced at the same time as the Mini (Wood 1988, p.139).

The contrast with Ford is striking. In the words of the American subsidiary's former director, John Barber:

> . . . BMC should have said, 'Where do we fit into the market? We've got the most sophisticated car in the world. We can afford to charge another £100 more than the wretched Ford Runabout' (Wood 1988, p.139).

Barber's words were borne out by his own product planning division. Ford engineers were told to strip a Mini and analyse its cost - part by part. Their investigation showed that BMC was loosing approximately £30 per vehicle!

It is clear that there were powerful demand forces driving postwar recovery. Rising incomes and falling prices put motoring within the reach of many people. When regional policy initiatives were conceived, the future seemed bright. It was thought that a growing industry could afford to relocate. However, the 1960s saw an increasing focus on supply constraints.

---

[6] One notorious example was Rootes' attempt to increase market share in the 1960s.

§3.5 Supply Factors

Just as demand factors may be analysed through a demand function, so supply factors can be introduced with a production function. Basic economic principles hold that output is determined by the combination of capital, labour, land, raw materials, and technical knowledge. In postwar experience, raw materials acted as a constraint only in the 1940s and early 1970s. Land (except its location) has always been a marginal issue. It is the other three elements which provide the essential backdrop to Britain's auto-industrial decline.

The received wisdom on the level and direction of capital expenditure in Britain's motor industry was outlined by members of the Expenditure Sub-Committee in 1975 (HMSO 1975b, p.39):

> . . . much of the British disadvantage in terms of value added per man was a result of insufficient investment. A large proportion of the remainder is attributable to the age of the capital stock. Investment in the British motor industry has fallen progressively below requirements . . . The Ryder Report said that whilst the automotive industry replaced most machinery after 8 to 12 years, more than half of British machines were over 15 years old. It concluded that this was a dramatic indication of BLMC's serious underprovision for depreciation. Mr Urwin of Sir Don Ryder's team told us that British Leyland had the oldest plant of any motor firm in the world . . . At Dagenham, Mr Murphy told us that most of the equipment was over forty years old. Tool-makers had to use antiquated equipment, and presses imported from Detroit in the 1930's were used at Dagenham . . . *We believe that inadequate investment and lower productivity of old plant have been the greatest contributors to the poor profitability of the mass-production car side of the industry* [emphasis as in original].

This analysis relied on anecdotal evidence and a perceived statistical relationship between fixed assets and productivity. Studies completed in the early 1970s (HMSO 1975b, p.36) suggested a causal link between value added per man (Y_1) and fixed assets per employee (X_1):

	897.39	+	$1.203X_1$
Standard Errors Y1	(837.17)		(0.25)
T Statistic	(1.07)		(4.79)
			R^2 0.657

Of the five least capitalised firms in 1975, four were British, while the top six included the American giants and their German counterparts. The most efficient UK firm was Ford, but even this compared poorly with its international rivals. To many, the low level of investment was indicative of management failure and labour intransigence. It has been suggested that labour failed to accommodate itself to factory life, while management proved unable to cope with manufacturing change. Lewchuk (1985, 1986) offers an alternative theory, based on the unique institutional development of British car firms.

He argues that profit maximising behaviour in the interwar period created a series of institutional constraints which inhibited investment and long term growth. The British strategy was one of weak managerial control, low wages, low capital-output ratios, low levels of machine integration and piecework payments systems. This strategy allowed a relatively unproductive technology to generate high levels of return on invested capital. As the system developed, a uniquely 'British' institutional framework emerged which was inconsistent with fordist methods. Bosses only addressed the problem in the 1960s, when a technological lag had already developed. British firms then proved unable to manage the change to fordist technology, with dire consequences.

Whatever the merits of Lewchuk's case, it does address the fundamental issue of Britain's peculiar capital structure. Whereas our competitors invested heavily in new machinery, British firms did not. This may be evidence of institutional problems, but it

may also reflect short-termism. For our immediate purposes, it is enough to identify three phases of investment activity in postwar Britain.

The first and smallest occurred between 1950 and 1953 (Rhys 1972, p.368). Firms were attempting to meet pent-up wartime demand and the government's export targets. Expansion was based around existing locations, although the use of 'shadow factories' produced some regional expansion. Between 1954 and 1958 there was a period of more substantial activity. BMC expanded and re-equipped Longbridge, Vauxhall did the same at Luton and Dunstable, as did Ford at Dagenham and Woolwich Arsenal. Together these plans envisaged an extra 10,000 jobs, sited within traditional car making areas.

The third wave occurred between 1960 and 1963, bringing total capacity up to 2,400,000 vehicles per year. This expansion was governed by government direction and financial inducements. In 1960, Ford moved its commercial vehicle production to a new plant near Slough; BMC moved truck production to Scotland; Ford, Vauxhall and Standard brought their Merseyside plants into operation, and from 1963 Rover operated a plant in Cardiff

These phases provide the focus for this study. In the 1940s and 1950s the Board of Trade proved unwilling to use its location controls. In 1954 officials noted (PRO 1954c), 'Can we, or should we pit our amateur judgements about the effects of given locations on costs against companies prepared to back their investments to the tune of £25 to £30 million?' Only five years later, IDCs were systematically employed against the motor firms.

Poor industrial relations have been characterised as the 'other' supply constraint restricting British car production. The basis for this claim is that strikes and other disputes have disrupted output, reduced investment and raised unit costs. Certainly, the number of strikes rose in postwar Britain (Table 3.6), but it is difficult to isolate specific causes or effects.

TABLE 3.6

STRIKE ACTIVITY IN MOTOR MANUFACTURING, 1949-73

Period	Average Number of Strikes Per Year	Average Working Days Lost Per Year
1949-53	25.4	170.4
1954-58	35.4	125.6
1959-63	106.2	377.6
1964-68	185.6	544
1969-73	272.6	1853.2
1974-78	194	1893.6
1979-83	105.2	1069

Source: Marsdon *et al* (1985, p.121)

Turner *et al* (1967) analysed the period up to 1964. They blamed cyclical and seasonal employment variations, together with high but unstable incomes for the increase. They found that lost days tended to rise during recession, and that negotiators on both sides 'saw strike activity as a means of reducing output to avoid lay-offs' (Marsdon *et al* 1985, p.121). The authors also echo Lewchuk's premise, suggesting that obsolescent institutions aggravated industrial problems. Durcan *et al* (1983) studied the years from 1964-1973. They explained labour unrest through the hardening of product markets and a long term loss of international competitiveness. Marsdon *et al* (1985) brought this work into the 1980s. They identified two distinct periods of conflict: the first (1977-79) focusing on pay, the second (1980-83) centring on effort levels and working arrangements in modernised plants.

These studies explain the subject of disagreement, but not the cause. Disputes would not have been possible without high-handed managers, militant unions and mutual distrust. As the Expenditure Sub-Committee argued, 'While the causes of disputes may be many, efficient and fast communications will minimise their impact' (HMSO 1975b).

Whatever their cause, strikes have always been used as a management alibi. The employers' federation, the SMMT, outlined the traditional case in 1975, seeking to deflect blame for the industry's plight:

> The high level of industrial disputes in the motor industry has inevitably led to losses of production that have not been made up. . . It is estimated that in 1973 the production of some 430,000 cars was lost due to industrial disputes and that in 1974 this total was exceeded by 17%, to give total car losses of 540,000 units, of which 200,000 units were lost because of the miners' dispute and the related three day working . . . Such losses of production for an industry that had been forced to cut back its investment over many years, caused severe supply shortages of British vehicles, particularly in 1972 and 1973. The shortages contributed to higher imports and lower exports than could otherwise have been achieved. (HMSO 1975b, p.379)

These arguments are important because of labour's regional dimension. Part of the attraction of Development Districts was the lower wage costs. The congested West Midlands offered the right infrastructure, but in an inflationary setting. Migrant firms could benefit from lower regional wages, so long as other operating costs were controlled. But if worker militancy was a concomitant of regional expansion, there is an implied link between regional policy and industrial decline. Again, quoting from the SMMT, 'Government restrictions of expansion in existing locations forced vehicle makers to move from their traditional locations to areas where the labour force was unused to the mass production techniques used in the motor industry. . . Higher costs and labour problems have led to inefficient operations and this has undoubtedly had major implications to the industry's competitiveness' (HMSO 1975b, p.382). These issues will be explored in much greater detail in Chapter 8.

The final element of the supply equation comes under the heading of technical change. This may be more appropriately labelled organisational change, since developments relate to working practice rather than mechanical innovation. As far as the British postwar motor industry is concerned, technical change traces the development of fordist structures and the subsequent adoption of lean production techniques and a *kaizen* philosophy.

Early cars were built by tradesmen. Because they possessed essential skills, workers determined the pace of production and factory conditions. But this balance of power was overturned by Ford's assembly lines. Before Ford, one skilled mechanic, plus a few helpers, would construct an entire engine by hand. At Highland Park, engines would be made by hundreds of unskilled workers, each performing specialist tasks. 'One would ream bearings, one every seven seconds , all day long; and the next would put bearings on camshafts, one every 14 seconds, all day long' (Rubenstein 1992, p. 27). Frederick Taylor was the guru behind these moves, inspiring Ford to divide factory operations into hundreds of discrete activities. Henry Ford boasted that by the early 1920s, 85% of his employees could learn their jobs in two weeks, 43% in one day' (Rubenstein 1992). These methods have been characterised as 'a relentless search for productivity through de-skilling' (McKinlay and Starkey 1994).

In Britain, fordism was first imported through the Old Trafford plant in Manchester. Though Ford cars had been sold in Britain since 1903, they came boxed, complete and paid for COD. (Richardson 1977, p.67) At first the Trafford Park plant was an assembly depot, but it was soon transformed into an impressive production facility. The irresistible logic of fordism dictated that economies of scale should be exploited to the full. In 1924, Ford acquired the 307 acre Dagenham site to do just this. With a planned production capacity of 200,000 units per annum, it became the biggest vehicle plant outside the United States. It provided 6,000 jobs when it opened in 1931, and over 12,000 by 1939 (Friedman and Meredeen 1980, p.22).

Fordism became the ruling idiom of motor manufacture. Scientific management raised scale economies throughout the interwar period. But British manufacturers could never match Ford America. The British market was both too small and too fragmented to allow the full adoption of fordism (Bowden 1991, Bowden & Turner 1993). Import barriers protected home producers from overseas competition, and mass producers like Morris and Austin returned acceptable profits, despite their size and pay structures (Lewchuk 1986).

In the postwar period, British manufacturers could no longer ignore fordist logic. With the ending of boom conditions in the early 1950s, the British faced tariff reductions and an invasion of foreign marques. Competition became increasingly based around both cost and quality. Whereas competitors like Volkswagen had eagerly embraced a fordist strategy (Bloomfield 1972), British firms faced a transformation crisis. Mergers, model rationalisation and pay disputes evidenced a switch from traditional manufacturing techniques towards an American outlook.

This is important because regional expansion was conceived during the upheaval. Halewood, Ellesmere Port and Linwood were all planned as integrated manufacturing bases, borrowing best practice technology from around the world. Operating problems could have been caused by either regional problems, or the switch in manufacturing ideology. In either case, management faced a profound organisational challenge.

Fordism did not survive into the 1990s. Instead, the Japanese system of 'lean production' has become the ideal (McKinlay and Starkey 1994, p.191). Lean Production refers to a participative labour structure, 'Just in Time' production, compressed product development, and flexible work rules (Roos *et al* 1990). It is an integrated manufacturing process, spanning all levels of organisation (including its supplier network) in pursuit of a rapid response to demand. 'It is this novel combination of simultaneous gains in efficiency, innovation and quality which has exposed the weakness of Western manufacturers' reliance on strategies which define scale economies and product variability, cost and differentiation as irreconcilable alternatives' (McKinlay and Starkey 1994, p.191).

The success of Japanese manufacturers has forced British firms along similar lines. Ford UK introduced its 'After Japan' (AJ) strategy in the 1980s, whilst Rover sought partnership with Honda. This produced the second major manufacturing switch since World War Two. It resulted in a new wave of closures and strikes, as plants were redesigned along Japanese patterns.

§3.6 Conclusion

From this discussion, it seems that the British car industry has been in constant turmoil. Early pioneers fell by the wayside, to be replaced by men of vision like Austin and Morris. The interwar years introduced the 'Big Six' to market domination. Tariffs and the tax structure allowed these firms to establish a stranglehold, and they looked well placed to prosper in postwar Europe. But the insularity of British manufacturing would elicit a heavy price. Domestic stagnation and the lifting of trade restrictions forced firms into defensive mergers. The adoption of fordist methods became an imperative rather than an ideal. The ensuing transformation crisis showed that British firms lacked the organisational flair to respond to their competitive environment. By contributing to a climate of uncertainty, both government and labour added to the industry's problems. Lean production and Japanese investment provided an escape, but not before thousands of jobs had been lost.

This is the industrial context of our regional policy case studies. If the motor firms faced regional problems, they also confronted wider organisational challenges. The task is to separate the wheat from the chaff.

PART II

REGIONAL POLICY EXECUTION

4 Labour's Regional Policy 1945-51: a Question of Efficiency

§4.1 Introduction

> If it can be assumed that the industrialist himself has made a just appreciation of economic advantages of different sites open to him, it must be supposed that manufacture on an alternative site which he has not chosen will in general be commercially less efficient. Any decrease in efficiency in an industry must at all times have disadvantages for the industry itself . . . and thus upon the whole economy of the country.
>
> Board of Trade Evidence, Barlow Commission 1937.

Despite these misgivings, the Board of Trade found itself in nominal command of industrial location in Britain until 1964. This chapter examines the wartime planning and postwar administration of regional policy. The aim is to investigate how a coercive distribution of industry programme was reconciled with concepts of entrepreneurial freedom, private industrial costs and market based economic solutions.

While there has been much recent interest in economic performance and policy constraints under Attlee, this has been dominated by macroeconomic issues and the debate over Keynesian demand management. The recent controversy over industrial efficiency has done little to address this gap, becoming polarised between the Broadberry/Crafts (1996) focus on possible negative long run microeconomic consequences of Labour's macroeconomic platform, and the Tiratsoo/Tomlinson (1993) view that Labour's policies were responsible for strong productivity growth in the late 1940s. In both cases regional instruments have been mainly ignored, reflecting a situation where 'whole areas of government activity have tended to remain unexamined, largely imagined rather than established' (Tiratsoo & Tomlinson 1993, p.19).

Existing work by McCallum (1979), Parsons (1986), Heim (1987a, 1987b) and others suggests that the Labour government pursued a forceful mix of building controls and material rationing in an effort to steer industry to depressed areas. This chapter builds on Rosevear (1998), and argues that the extent and radicalism

of postwar regional policy has been exaggerated, and that there was substantial continuity in approach under Labour. This consistency was the result of wartime negotiations which granted a discretionary regional policy portfolio to the Board of Trade.

Despite the efforts of critics such as Douglas Jay, the Board's understanding of regional policy reflected market based rather than interventionist thinking. Departmental philosophy centred on competition and productivity issues, and betrayed a limited conception of externalities. This approach contrasted with other departments, where notions of 'efficiency' embodied wider economic and social domains. Wartime negotiations and macroeconomic constraints ensured that the Board's thinking dominated the regional policy machinery. As a result, businesses were able to circumvent location controls by appealing to narrow 'efficiency' arguments. This bias was intensified because the Board lacked the economic education to challenge such claims. If firms were to be dispersed without compromising 'efficiency', the Board needed to understand the implications of industrial relocation. Instead, officials and ministers became involved in a bargaining process where they were unable to counter manufacturers' assertions. Frustration eventually led to a government sponsored academic study (the Clay Committee), but it reported too late to affect regional policy in the 1940s.

The chapter begins by re-evaluating the regional policy debate within the wartime coalition. There follows a case by case study of important location decisions, before the focus shifts to informational problems and the role of financial incentives. The analysis ends with an outline of policy developments during the early years of the Korean War.

§4.2 Reviewing Policy

The best treatments of regional policy planning under the wartime coalition remain in Booth and Parsons. Both maintain that war conditioned officials and politicians to the possibilities of a strong distribution policy.[1] According to Parsons (1986, pp 46-57), the Defence Regulations of 1941 provided a bridge between the Barlow Commission's recommendations and the successful peacetime application of

[1] See also Loebl (1988) and McCallum (1979).

industrial steering. Booth (1982, pp 16-17) argued that wartime planning proved more than a passive accelerator, breaking the Board's faith in market solutions.

In its final report the Barlow Commission had rounded on two themes, a belief that large conurbations were undesirable, and explicit acceptance of government control as a means of securing a 'satisfactory distribution of industry,' although this term was never defined. As the opening quotation suggests, the true home of free market orthodoxy in the 1930s may not have been the Treasury, but the Board of Trade. War did provide a discontinuity, but only because it allowed the concept of efficiency to be debated within a regional policy context.

The Board of Trade's concept of 'efficiency' reflected its interwar brief as a custodian of industry. Following a departmental inquiry in 1918, the Board had formed an Industries and Manufactures department to oversee the 'development and stability, production, and economic strength' of British manufacturing (Foreman 1986, p. 94). This marked a new departure for the organisation, which had traditionally been concerned with elements of commercial policy, trade statistics and company law.[2] Industries and Manufactures underwrote reports on overseas markets, industrial relations and the textile and metal industries, helping to frame the ill-fated Cotton Industry Reorganisation Act of 1939. But these were consultative rather than regulatory duties, and they reflected the words of Lord Ashfield, the Board's first interwar president, 'The great task of assisting in the restoration of our trade and industries after the war, which will largely fall on the Board of Trade, depends for its success on the closest co-operation with the business community' (Foreman 1986, p.94).

While it is clear that the Board's officials came to accept the general principle of intervention, there are reasons to believe that these historic links with business conditioned policy administration. Yet it was precisely these links that allowed the Board of Trade to placate a sceptical cabinet, and secure the regional policy portfolio from the Ministry of Labour.

The evidence for this view is quite straightforward. It is clear that the impetus for change can be traced to the appointment of former LSE economist Hugh Dalton

[2] Smith (1928) outlines the Board's pre 1914 duties.

as President of the Board of Trade and the establishment of the Reconstruction Department in 1942 (Pimlott 1985, pp. 392-407). By this time the Board had already assumed control of industrial location through its Factory Space and Storage Premises division (Meynell 1988, p 205). Nevertheless, it was not until 1943 that Dalton's views could be articulated within the Cabinet's reconstruction machinery. The surviving papers from relevant committees clearly identify efficiency as the key operational concern.[3] Memoranda and minutes relating to distribution are dominated by the efficiency question, and Dalton is continually forced to field questions from both sides of the ideological divide.[4] On the one hand, the Ministry of Labour and Ministry of Town and Country Planning favoured a proactive policy, promoting the notion of 'community efficiency' over private interest; while on the other, the production ministries, Economic Section, Treasury and Ministry of Supply derided any attempt to impose 'unjustifiable disadvantages' on industrialists.[5] The opposition to distribution of industry policy was founded on deep seated ideological convictions, but it was the Board of Trade's emphasis on private costs which marked the department as a champion of the market optimists.

The Barlow Report itself had called for both decentralisation and dispersal (HMSO 1940, pp. 197-98). Explicit within this view was a focus on the social and economic externalities of industrial concentration. But in both the final recommendations and dissenting memoranda, a clear distinction had been made between the national position and private industrial interests. As a whole, the Commission was in sympathy with notions of community efficiency. This was the view promoted by the Ministries of Labour and Town and Country Planning. But the report also included commitments to safeguard 'the conditions of successful industrial growth'. This reflected the Board of Trade's more traditional view of

---

[3] The relevant committees include the Committee of Reconstruction Priorities, Reconstruction Committee, Distribution of Industry Committee and Lord Presidents Committee. For details see Alford *et al* (1992), pp. 26-29.

[4] For representative memoranda see: PRO (1944c, 1944d, 1943g, 1943d, 1943e). Minutes of the key meeting to articulate these fears can be found in PRO (1944b).

[5] The term 'unjustifiable disadvantages' may be found in PRO (1943e). It continues, 'In general, a policy of banning would penalise the efficient and enterprising, and if effective would involve those sections of industry which can make the greatest contribution to the general economic well-being'. The term 'community efficiency' is promoted in PRO (1943d).

externalities, with an inherent focus on competitiveness and market based solutions.

Discussions within the wartime coalition focused on this distinction. The fact that Dalton secured acceptance for his distribution policy cannot be separated from these administrative rivalries, or the battle for the regional policy portfolio. Doctrinaire opposition from the right had to be squared with a widespread realisation that something had to be seen to be done.[6] Board of Trade stewardship offered a compromise with which the right could live, and the left could survive.[7] This compromise was based on the historical links between business and the Board of Trade. As Lord Woolton made clear in April 1944 '. . . it should be recognised that it [the Board of Trade] approaches the question of location of industry from a special angle. Indeed, it must continue to do so if it is to carry its responsibilities effectively' (PRO 1944d). The 'special angle' revolved around private industrial interests and the maintenance of competitiveness.

Many departments were unhappy with this compromise. The Ministry of Labour in particular never quite came to terms with the arrangements (PRO 1954q). The question of overall responsibility for distribution policy had split the Barlow Commission, and was to provide a wedge between the Ministry of Labour and Board of Trade until the mid 1950s. Lord Woolton's decision to favour the Board of Trade had been defended by the need to provide a single contact for business (PRO 1943-44h). However, the Board was to enjoy a status somewhat above *primus inter pares* (Table 4.1). Given Woolton's reservations about any form of distribution policy, there seems little doubt that safe-guarding efficiency was a key concern.[8]

---

[6] Fears of postwar regional unemployment were noted by wartime officials; ' . . . all the classes in the North East, and especially the working classes, are obsessed with the fear that the Government are not making effective plans to avoid the North East coast becoming a depressed area when the war and its immediate aftermath of productive activity are over' (PRO 1943a). Middleton (1985) argues that these fears were deeply embedded, identifying 'metropolitan prejudices' and 'deficient expertise' as constraining forces in the interwar period.

[7] The alternatives were for an Industrial Commission or the Ministry of Labour or the Ministry of Town and Country Planning to administer the new location policy.

[8] Woolton went on to explain '. . . it is sometimes suggested that the Government by one method or another should control the actual location of all new factories. Apart from its obvious political difficulty, such a degree of state control would, in our opinion, react most unfavourably on initiative and efficiency. . . It would also tend to involve the Government in a wholly undesirable responsibility for the success of particular undertakings which, if they were unsuccessful, would

TABLE 4.1

THE BOARD OF TRADE'S POSTWAR POLICY PORTFOLIO

Functions of Board of Trade under Chapter 3 of the White Paper on Employment Policy:

- General co-ordination of industrial policy (para 30)
- Assisting basic industries towards efficiency and exports (para 24)
- Dealing with applications for the establishment of new factories and for transfer of existing factories (para 26)
- Dealing with applications for industrial building licences (para 26b)
- Disposal of government factories (para 26b)
- Erection of government factories and trading estates in Development Areas (para 26d)
- Dealing with applications for financial assistance for new enterprises in development areas (para 26f)
- Development of basic services in Development Areas (para 27)
- Organisation of research to determine suitable industries for Development Areas (para 27)
- Delimitation from time to time of Development Areas (para 28)

Other new Board of Trade Functions:

- Sifting information on restrictive practices
- Study of regulating hire purchase transactions according to the state of trade
- Dealing with applications for facilities to prepare for postwar trade by assisting factory scale testing of new inventions
- Oversight of proposed Industrial Design Council
- Arrangements for proposed Industrial Development Boards
- Control of civilian production while resources continue to be scarce, involving dealing with applications for materials and manufacturing licences

Source: PRO (1944e)

The undertakings given by the Board of Trade and the subsequent record of achievement qualifies Barnett's notion of New Jerusalem triumphant.[9] The debate over industrial efficiency witnessed the triumph of a distribution policy based on entrepreneurial freedom and the interests of individual manufacturers. In no sense

---

claim that their failure was due to the Government having forced them to set up in bad location' (PRO, 1944c).

[9] Barnett (1995, p.340) bases his discussion on a perverse interpretation of this evidence. Taking five cases, GEC, Ford, Vauxhall, Champion Spark Plugs and De Havilland, he recognises that 'productive efficiency triumphed over the social aims of regional policy'. Yet Barnett (1995, p.343) concludes that 'regional policy's real concern lay *not* [emphasis added] with productive efficiency, which it served to hinder, but with jobs. . .' Further, he identifies delay and prevarication as constraints on entrepreneurial activity. But Chick (1992, p.77) has demonstrated that excess demand for private investment persisted beyond 1947, and that resources were often spread too widely to enable project completion. In this context, administrative delay cannot be characterised as an additional constraint.

was 'social rescue' placed above competition or productivity issues.[10] The immediate postwar need for output strengthened this trend. From 1945 to 1951, Labour administrations struggled to balance their limited commitment to regional policy with many other pressing macroeconomic goals.

§4.3 Applying Policy (1) 1945-49

As we have seen in Chapter 2, there were four regional policy tools available to the government in 1945, financial inducements, advance factories, discriminatory government contracts and location controls. The Distribution of Industry Act (1945) had given Cripps the legal foundation for an energetic directional policy.[11] The usual portrayal of this period is in keeping with Barnett's interpretation. Taking new industrial buildings as an index, one can see that the Development Areas received over 50% of new building investment in 1945-47, though having only 20% of the population (Table 4.2). This has been viewed as an indication of the effectiveness and strength of Labour's regional policy commitment. However, this notion is flawed.

---

[10] Barnett (1995, pp. 252). Compare with PRO (1946k).

[11] The Act replaced earlier legislation and defined slightly enlarged Development Areas. The Board of Trade retained its wartime role and was granted significant new powers. These included:

1. The right to build factories in the Development Areas, buying land by compulsory purchase if necessary.
2. The right to make loans to industrial (trading) estate companies.
3. The right to make provision for basic public services.
4. The right to reclaim derelict land.
5. The right to give grants or loans to assist specific industrial undertakings on the advice of the Development Areas Treasury Advisory Committee (DATAC).

TABLE 4.2

POST WAR BUILDING IN THE DEVELOPMENT AREAS

	Million Sq. Ft of Industrial Building Approved in DAs	Development Areas as % of All GB Industrial Building	Insured Population of DAs as a % of GB
1945-47	15.7	51.1	19.9
1948-50	7.5	17.2	18.3
1951-53	8.1	21.7	18.2
1954	12.8	18.1	18.1

Source: McCrone (1969, p.112).

First, there is the general point that initial successes were based on persuasion rather than coercion. It was during these years that the Board's 'Information Room' first began providing businessmen and officials with new perspectives on industrial location.[12] Official papers from the time make clear an institutional preference for communication (PRO 1946k). This is hardly surprising given the background of the controllers responsible for the policy and their laissez faire sympathies. The emphasis on informational failure also shows the extent to which the Board internalised efficiency questions. There was little sense of the externalities involved in site selection or any possible wider economic or social issues.

The second qualification centres on the origins of the permit system. Building licences had been introduced to manage scarce resources; it was only in 1943 that a regional component had been proposed (Meynell 1959, p.15). The idea was to speed reconstruction by linking location with the right to build. Arguably, this equated distribution of industry policy with a form of rationing. While Cripps firmly believed in Labour's regional commitment, location decisions point to resource management rather than ideological fervour.

The statistics for industrial building in the late 1940s and early 1950s support the view that the geographical pattern of material and labour shortages helped to determine the distribution of new building. There were marked regional differences in the time elapsing between official approval and the start of construction (Board

[12] For a retrospective view of the Information Room's success see PRO (1957a).

of Trade 1955, p.425). Nationally, 42% of all approvals from 1945-53 were started within six months. The corresponding regional figures were 26% in London and the South East, 37% in the Midlands and East, and 38% in the North West. In Scotland, Wales and the North more than half of all approvals began within the same period. This implies a closer match between resource availability and building programmes in the outer regions than existed in either the Midlands or the South East.

Resource availability centred on three questions, labour, housing and material supplies. The shortage of building labour in Coventry and the South East certainly hindered public works and factory construction (PRO 1951i). Skilled and non-skilled manufacturing labour was also at a premium in many towns. Housing shortages were regionally variable, being dependant on both the supply of homes and the demand from displaced workers.[13] This was particularly acute in Greater London and the Midlands, where bomb damage and economic growth combined to create a housing bottleneck (PRO 1949b). The shortage of steel also coloured attitudes towards industrial expansion, and forced the government into a highly discretionary allocation programme.

Although projects under 5,000 sq. ft avoided direct location controls, material, labour and housing allocations to large industrial projects channelled resources away from minor schemes. This helps explain the rising tide of businesses who actively sought relocation during 1945-8. By default, sites in the South and the Midlands were rationed to the government's perceived highest value use. Large scale engineering expansions acquired government sanction and resources, the heterogeneous mass of smaller projects competing on the domestic front faced cancellation, delay or relocation. In many cases, relocation was the preferred option, aided by government financed building projects which provided 9.4 million square feet of industrial space by September 1949 (Scott 1996, table 1). This conclusion is supported by Luttrell's (1962) study on the costs of industrial location, which found that of a sample of 93 firms which chose Development Area sites from 1945-52, 84 listed labour shortage or inadequate premises as the

[13] For a discussion of Coventry's position, see Richardson (1972, p. 224). A general survey is provided in Holmans (1987, pp. 91-166).

impetus for movement. These claims can be substantiated by referring to key building cases.

The motor industry provides an ideal reference point for this exercise. In terms of 'efficiency', Labour promoted the sector as the key export earner of the late 1940s. In terms of compliance, the industry had been unusually close to Whitehall throughout the war (Morewood 1990). In terms of constraints, there was an acknowledged need to expand and provide new production facilities as soon as possible. The industry was also important because it demonstrated virulent hostility towards government plans for decentralisation. While the ferocity of this opposition may have been unrepresentative of general manufacturing, it serves to highlight the fundamental conflict between government and business created by regional policy. Surprisingly, this conflict has received scant attention from historians, warranting little more than footnotes in many industry and business histories.[14] This is regrettable, since a close examination shows how officials consistently placed current production above distribution policy, and how politicians ultimately abandoned the principle of coercion.

The first example is that of Jaguar, who submitted an application to upgrade their Coventry plant in September 1946, and employ an additional 500 workers.[15] Given the labour scarcity within Coventry, an even-handed application of Barlow's principles might have forestalled the project. However, the Board of Trade's domination of regional policy administration and its officials' emphasis on securing their own version of 'efficiency' ensured a passive response.

The issues facing government were deceptively straightforward. Coventry was in an acute state of dislocation. Building labour and materials were in short supply, raw materials for manufacturing were scarce and skilled labour was at a premium. The motor industry had already been identified as a potentially 'propulsive' industry, forming part of Abercrombie and Matthew's strategic regeneration plan

---

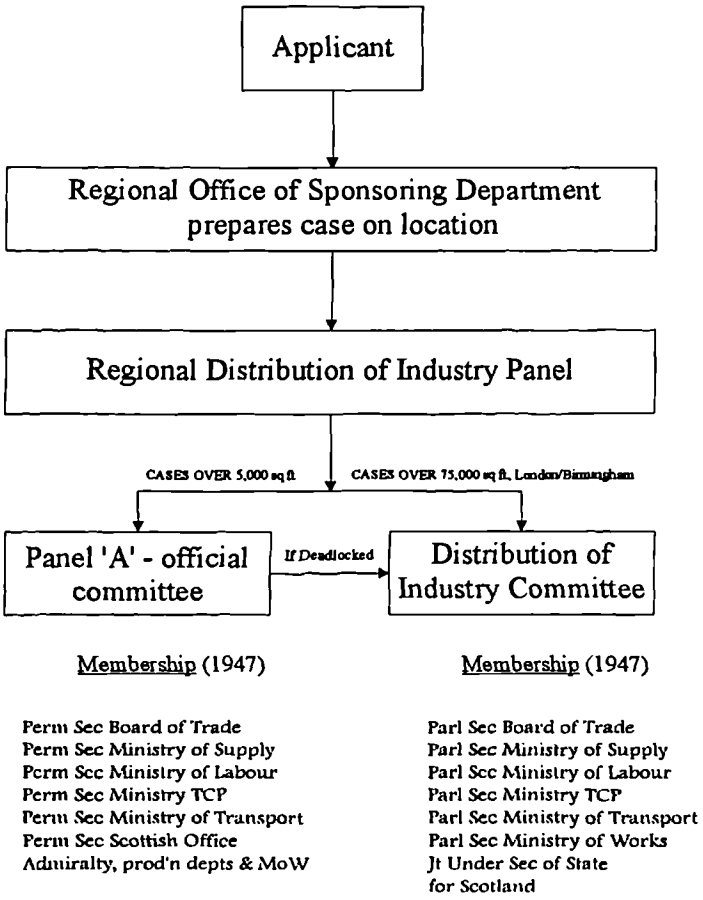
[14] E.g. Thoms & Donnelly (1985 p. 153); Rhys (1972, p.177) and Foreman-Peck *et al* (1995, p.205).

[15] The plan envisaged the erection of four new bays as well as additional canteen and office facilities (PRO 1946d).

for the Clyde Valley (Clyde Valley Regional Planning Committee 1948). But under the terms of its portfolio, the Board was to examine Jaguar's application as an 'efficiency' issue. For its part, Jaguar mounted an effective campaign. Its representations were based on the need to find an economic level of production to procure export sales. Jaguar's case was argued through its sponsoring department, the Ministry of Supply, which acted as the company's advocate throughout the closed hearings. The dispute was channelled through Panel A to the Distribution of Industry Committee (see Figure 4.1), where wartime debates over 'efficiency' were rehashed within a new macroeconomic and administrative framework.

FIGURE 4.1

DISTRIBUTION OF INDUSTRY COMMITTEE STRUCTURE, 1947



The minutes of relevant meetings clearly emphasise departmental divisions. While ministries were not pro or anti-efficiency, their recommendations were based on their particular conceptions of the issue. Hence the Ministry of Supply and

production departments internalised the problem, focusing on competitiveness and cost criteria, while the Ministries of Labour and Town and Country Planning emphasised the repercussions for Coventry's economy and the potential wider benefits of Development Area relocation. But outcomes were mediated through an administrative system which favoured conservatives. Of the three major ministries with economic briefs, only the Ministry of Labour was prepared to recognise the wider economic and social costs of industrial location. The Board's refusal to countenance these ideas created a natural majority in Jaguar's favour.

While the administrative setting was decisive, the macroeconomic environment also helped determine negotiating posture. Regional policy was neither conceived nor administered in a vacuum. Although Jaguar's case came before the sterling crisis, dollar exports were already at a premium. The company succeeded in characterising its application as a choice between competitive export performance versus congestion and rising costs. As far as Jaguar was concerned, relocation was unsuitable for a medium sized engineering firm facing production constraints. Despite the lack of any quantitative evidence, this view was never seriously challenged by the Ministry of Supply or Board of Trade. The former fulfilled its role as advocate, the latter deferred to 'expert testimony'.

This case highlights a crucial point. When distribution of industry policy was tested at either official or ministerial levels, the benefit of the doubt was habitually given to the industrialist.[16] This served to push resources towards the more favoured industries. These arguments support Tiratsoo's claim that Coventry was placed in a 'forcing frame' by Development Area concerns (1990, pp. 20-27). On the one hand, officials and ministers wanted to decentralise footloose industry, on the other, output losses in strategic sectors could not be tolerated. By allowing *in situ* motor industry expansion and restraining competing developments, the government was 'picking winners'. Space was allocated to strategically important sectors in the same way that raw materials were channelled into export earning

[16] Records show that up to the end of Jan. 1946 Panel A had deliberated on 801 building cases, of which only 18 (2.2%) had been cancelled or refused (PRO 1946c). Although summary statistics are unavailable for the remainder of 1946, it is clear that the trend continued. For example, from Oct. 1946 to Jan. 1947, when the Panel considered over 100 cases, only 2 refusals were noted (PRO 1947a).

firms. However, what Tiratsoo fails to appreciate is the crucial role of the administrative structure and informational asymmetries in this process. The regional policy machinery had evolved to police wartime agreements. While officials were not anti-relocation, their 'efficiency' brief and the accompanying macroeconomic constraints highlighted cost data. In these circumstances, the government was ill-equipped to challenge business.

At this point, it is worth briefly considering the importance of the shadow factory programme. Shadow factories were the result of close collaboration between the Air Ministry and motor manufacturers throughout the late 1930s.[17] Their aim was to provide additional manufacturing capacity to meet the RAF's projected wartime needs. The plants were run on an agency basis by individual motor firms, and were co-ordinated through a system of managerial committees.

Although there was a commitment to placing rearmament work in the Special Areas, much of this new capacity was centred in, or close to established manufacturing areas. Indeed, when the shadow plant programme was extended in 1939, the Air Ministry insisted that new plants should be sited close to existing facilities (Richardson 1972, p.67). Linkages and interdependence between plants ensured that Coventry received a major part of this investment (Table 4.3). The point is that many of these decisions were based on the same criteria as postwar projects. Despite the danger of bombing, notions of efficiency dominated decision making. In one celebrated case, a motor manufacturer was able to dictate its terms to government, despite both parliamentary and public censure.[18]

[17] For details see Morewood (1990, pp. 41-44), Thoms & Donnelly (1985, pp. 114-49), Collins and Stratton (1993, pp. 50-51).

[18] The controversy surrounded Rootes' decision to establish the Humber Aero-Engine factory in the Reading area rather than in a 'distressed area'. Rootes warned that if the factory were placed in either South Wales or Scotland, it would be out of the question for his organisation to run it 'at such great distances from its normal centres of operation.' For a detailed account see Morewood (1990, pp. 125-132). Eventually the company were persuaded to establish an additional shadow factory at Speke in Liverpool.

TABLE 4.3

SHADOW FACTORY EMPLOYMENT IN COVENTRY, AUGUST 1943

Factory	Location	Number of Employees
Daimler No. 1	Capmartin Road	2,584
Daimler No. 2	Browns Lane	5,321
Hobson Aero Components	Holbrook Lane	590
Rootes No. 1	Aldemoor Lane	n.a.
Rootes No. 2	Ryton-on-Dunsmore	5,528
Standard No. 1	Fletchamstead Highway	4,323
Standard No. 2	Banner Lane	6,064

Source: Richardson (1972, p.69).

The shadow factories provided a base for postwar expansion. One by one, the motor manufacturers bought the sites on very favourable terms. According to Morewood (1990, p.43), this option formed part of the original agreement between owners and ministers. Postwar location decisions reinforced this compact. They demonstrated that government continued to favour strategically important firms, despite regional employment worries.

Our second postwar example is that of Ford, Dagenham. This spans two building cases, illustrating the continuity of policy from 1945 until well after the sterling crisis. The first application was submitted in 1946 for an extension of 100,000 square feet to house additional manufacturing capacity (PRO 1946e). The application followed the same route as Jaguar's, although Ford mounted a much more active campaign. The economic arguments were virtually identical to the Midlands based firm, concentrating on the need to relieve congestion, secure lower unit costs and underwrite export sales. Throughout, Ford stressed the indivisibility of its investment plans, ruling out even partial relocation. Not surprisingly, departments adopted very familiar bargaining positions, but the case was distinguished by the Board of Trade's attempt to engage Ford in a process of negotiated compliance.

Bargaining can secure mutual benefits for government and industry. For the regulator, dialogue helps to secure intelligence which might be unavailable through conventional channels. For the firm, discussion makes forced compliance less likely and provides detailed insights into policy administration. In Ford's case,

permission to expand was largely unavoidable given the focus on 'efficiency' and exports. But the Board of Trade tried to impose conditions which would force the company into a negotiating framework. In the first instance, a ceiling was imposed on the numbers to be employed at Dagenham. This was set at 14,000, some 6,000 above the Ford target. Secondly, Ford were asked to prepare a study of dispersal strategies and the costs of relocation. The Board hoped that these provisions would force Ford into a closer relationship with planners, yielding new intelligence and placating the Ministries of Labour and Town and Country Planning. For Ford, the deal promised minimum interference and an opportunity to shape the policy agenda. While the company's chairman, Sir Patrick Hennessy, was probably aware that a labour ceiling was unenforceable, he may not have appreciated the Board's total inability to challenge cost data. This became obvious in 1948.

Two years after the first scheme, Ford applied to expand its Greater London plant once more (PRO 1948e). This time the scheme was to extend the foundry and to erect two new manufacturing buildings at Dagenham, while taking over 300,000 sq. ft in a former Hawker factory at Langley. The aim was to provide manufacturing capacity to support new models in the car, tractor and truck markets. The company had already exceeded the labour ceiling imposed in 1946, but nevertheless sought to increase Dagenham's workforce to 17,000. The plan ran counter to distribution of industry policy, the new towns programme and local planning regulations. Throughout the application, Ford used its contacts with the Ministry of Supply and the Board of Trade President to push the government towards approval. Of crucial importance to this strategy was the cost data which had been gathered in conjunction with officials from both departments.

The economic case facing the government rested on social and economic externalities versus quantifiable cost penalties. However, this episode was distinguished because a portion of Ford's investment could legitimately be regarded as 'footloose'. Fords' scheme involved increasing tractor production to 60,000 units per year, providing the first real opportunity to relocate a self-contained motor manufacturing plant to a Development Area. The Board of Trade hoped that a move would relieve the need for further expansion in London, and provide up to 5000 new jobs in Scotland or the North West.

Ford lobbied hard through Panel A to the Distribution of Industry Committee and the Production Committee. Their offensive was based on a costing exercise which computed a locational penalty of £22 per vehicle, should a tractor plant be established in Merseyside. This was based on an output of 60,000 units, producing annual losses of £1.3m. These estimates were questioned by the Ministry of Labour and the Ministry of Town and Country Planning, but officials lacked the information to successfully challenge such estimates. When it was suggested that Ford should be willing to absorb extra costs in the interests of wider social and economic concerns, the company countered that the 'resulting increased price for their tractor would have a disastrous effect on overseas demand' (PRO 1948d). They would only consider relocation if the government was prepared to provide £1 million towards equipment and an option to buy the new factory at 1939 prices. Ford admitted that these demands were both 'unreasonable' and *ultra vires* under British legislation.

Ford's manoeuvres adeptly illustrate how the government had become involved in a bargaining environment where informational asymmetries benefited industrial interests. Ford produced quantifiable data, which demonstrated an 'efficiency' loss. They also implied that refusal would affect dollar earnings and long term production plans. With a selling price of £250, if Ford only sold 50% of their tractors overseas, annual currency receipts would total £7.5 million per annum.[19] This was at a time when Ferguson were confidently predicting annual dollar sales of £106 million (MRC 1948). Given these potential penalties and the ascendancy of the Board of Trade's regional policy paradigm, the company's victory was almost inevitable. In the end only nominal restrictions were imposed, with Dagenham's foundry expanding to provide hundreds of new jobs.[20] More controversially, the company was also granted a very favourable lease on the Langley site. Much to the disgust of the Scottish Office and Ministry of Labour, the Development Area option was abandoned. In practice, this meant that Ford retained the option of future expansion at Dagenham, whilst circumventing the

[19] Price based on MRC (1946).

[20] This was despite planned rises in employment by other motor manufacturing firms in the area, i.e. Briggs Motors (PRO 1948c).

Ministry of Town and Country Planning's London decentralisation plan (PRO 1949e). This was a deal that Patrick Hennessy could live with.

The Ford case highlights three points. First, the continued ascendancy of the Board of Trade's policy criteria. This meant that when regional policy was put to active discussion, 'efficiency' usually determined the outcome. Secondly, the record suggests that companies were able to understand the Whitehall machinery and use its contradictions to further their own agendas. Where the distribution of industry was concerned, active lobbying clearly paid dividends. It was not a question of business interests frustrating policy, but of intelligent managers using the safeguards which had been built into the regional planning machinery.[21] Finally, it seems that the Board of Trade was handicapped by a legislative framework that militated against negotiated settlements. Whereas the French system would be designed to deliver 'package deals', the British system had to consider each application on its own merits. Given this brief, the results were inevitable.

These views are supported by surviving records at the Federation of British Industries archive. From March 1945 to 1950, minutes of the Grand Council betray a rather complacent attitude (MRC 1945-50b). Although ideologically opposed to any form of location control, the FBI did not feel that the Board of Trade's efforts were 'unreasonable' (MRC 1945a). The Presidents Advisory Committee considered the 1945 Distribution of Industry Act as a blessing in disguise, reflecting the coalition government's preference for persuasion rather than coercion. As Sir Peter Barnett noted, 'There would be some advantage in having a moderate measure on the Statute Books, as it would make it less likely that a more stringent view would be introduced by a later government' (MRC 1945a).

Even when the IDC was introduced in 1947, there was little opposition *in principle* to the new measure. Conflicts centred on information and a perceived lack of representation within the system. In the former case, businesses wanted a clearer idea of proscribed areas and the reasons for individual rejections (MRC 1947,1950, and PRO 1949a). In the latter context, attention focused on the

[21] On the general theme of institutional capture see Mercer (1995).

exclusion of businesses from Panel A and the regional boards, together with a lack of representatives on the Clay Committee.[22] None of these issues constituted outright opposition. They reflected general satisfaction with a system founded on the commercial idea of efficiency and the notion of persuasion, rather than control.

This raises wider issues relating to government/industry relations and regional policy. In particular, the level of economic intelligence and the Board of Trade's bargaining posture suggest fundamental weaknesses in the system. While the Board favoured an even-handed application of distribution policy, it proved largely incapable of mounting challenges to building cases in the South East and Midlands. Heim's examination of defence research establishments supports this view (1987b). Quoting from a Board of Trade memorandum on the siting of the Atomic Weapons Research Establishment, she highlighted a crucial intelligence gap (1987b, p.379):

> Our attitude to the scheme is not that we object to it at Aldermaston, but that we want to see it in a Development Area. We *can't prove* to the Ministry of Supply that this latter course is practical. We must either accept their view that it isn't or we must refuse to accept it [emphasis added].

The Board was acutely aware of its limitations (PRO 1947b). The problem arose because the department's wartime role had precluded the management of manufacturing industry. The accompanying theoretical gap reflected the late development of regional economics in Britain. As late as 1949, a Board of Trade paper could only list nineteen English language items in its bibliography of location literature (PRO 1949b). Of these, ten were published in or before 1930, five related explicitly to the United States, and only five dealt with current spatial cost patterns in Britain (Table 4.4).[23] The list also omitted several important works, and reflected a general overseas bias in regional economic studies.[24]

---

[22] On the Clay Committee see MRC (1949). On representation in regional boards and Panel A, the sub-committee decided not to pursue this issue as they feared industrial membership would lead to a breach of confidentiality between firms; 'an industrial representative might be put in the invidious position of dealing with a confidential application from a competitor' MRC (1947).

[23] Current is defined as post 1930.

[24] See Brown (1969) and Blaug (1985) for a detailed review of industrial location and regional policy literature.

TABLE 4.4

THE BOARD OF TRADE'S LOCATION LITERATURE, 1948

Anon (1924) *New York Regional Plan Monograph 3* (New York).
Anon (1930) 'Variations in cost of power in different localities', *Electrical Review Supplement*
Champernowne, D.G. (1938), 'The uneven distribution of unemployment in the UK, 1929-36', *Review of Economic Studies*, 5, pp. 93-106.
Cunningham, W. (1902), 'The localisation of industry', *Economic Journal*, XII, pp. 501-6.
Dennison, S.R. (1939), *Location of industry and the depressed areas* (London).
Ellison, T. (1886), *The cotton trade in Great Britain* (London).
Hall, F. 'The localisation of industries', *12th US Census Manufactures Section* , part 1.
Hoover, E.M. (1932), 'The localisation of the shoe industry in the USA', *Quarterly Journal of Economics*, 47 pp. 254-275.
Hoover, E.M. (1949), *Location of economic activity* (London).
Jewkes, J, (1930), 'The localisation of the cotton industry', *Economic History,* 11, pp. 91-106
Jones, J.H. (1938) 'Memorandum of evidence' in HMSO (1938) *Minutes of evidence submitted to the Royal Commission on the distribution of the industrial population.* (London)
Kryzanowski, W. (1927), 'The literature of location', *Journal of Political Economy*, 6, pp. 278-291.
Mess, H.A. (1937), 'The present position in the distressed areas', *Political Quarterly,* VIII pp. 353-63.
Popplewell, F. (1906), *Some modern conditions and recent development in iron and steel production in America (*New York).
Predohl, A. (1928), 'The theory of location in relation to general economics', *Journal of Political Economy* 36, pp. 371-390
Ross, E.A. (1896), 'The location of industry', *Quarterly Journal of Economics*, 10, pp. 247-68
Shannahan, E. (1927), 'Economic factors in the changing distribution of population between urban centres and rural areas', *Economic Journal*, XXXVII, pp. 395-403.
Sykes, J. (1949), 'Some results of the Distribution of Industry Act 1945, *Manchester School*, 9 pp. 36-48
Weber, A. (1929), *Theory of the location of industries - translated and with an introduction by C.J. Friederich* (Chicago)

Source : PRO (1948b)

The departmental position reflected deeper problems within the British civil service. Sir Warren Fisher's 'single service principle' had succeeded in creating what was later called 'the cult of the generalist'. According to the Fulton Report, the ideal administrators were too often cultivated as gifted laymen, moving frequently from job to job, using their practical knowledge of government procedures to solve problems (Chapman 1988, p.33). The report continued, 'Often they are required to give advice on subjects they do not sufficiently understand or take decisions whose significance they do not fully grasp'. The Board of Trade's economic inexperience imitated these failings, imposing a bureaucratic constraint on policy efficacy.

For the Board of Trade, neither theory nor experience offered practical guidance. Officials and ministers had accepted a regional policy portfolio where their responsibility was to secure a balanced distribution of industry and safeguard competitiveness. They became involved in a bargaining process where firms resisted relocation by stressing the additional costs of Development Area sites. The Board lacked the ability to challenge these claims.[25] If doubts existed, officials and ministers were compelled by economic circumstances and their belief in market based solutions to favour businessmen. Nowhere was this more clearly illustrated then in the second Ford expansion.

A detailed examination of case papers and policy discussions reveals growing disquiet over the situation (PRO 1947c, 1949d). In an early recognition of the intelligence problem, the 1944 Employment White Paper had called for the government to 'organise research with a view discovering what types of industry will fit most naturally into the long term economy of each Development Area' (HMSO 1944, para 27). But it was not until 1946, one year into its new role, that the Board of Trade began composing a response. On the one hand, the Board sponsored limited enquiries by regional sub-committees of the distribution of industry panels into 'day to day' industrial problems in the Development Areas; on the other, a more fundamental examination of the 'general problems' of regional economic location was ordered (PRO 1946j). This latter study was entrusted to a committee chaired by Sir Henry Clay, a professional economist with long experience as a government advisor. The committee soon became the focus of one of the most extensive research initiatives of the late 1940s.

The Board of Trade deliberately tried to separate government departments from the research effort. It was thought that the work would prove exceptionally onerous, and that the recruitment of additional personnel would exacerbate the existing public sector skills shortage (PRO 1946j). Interestingly, the committee's terms of reference were also left vague (PRO 1947c). This was because officials

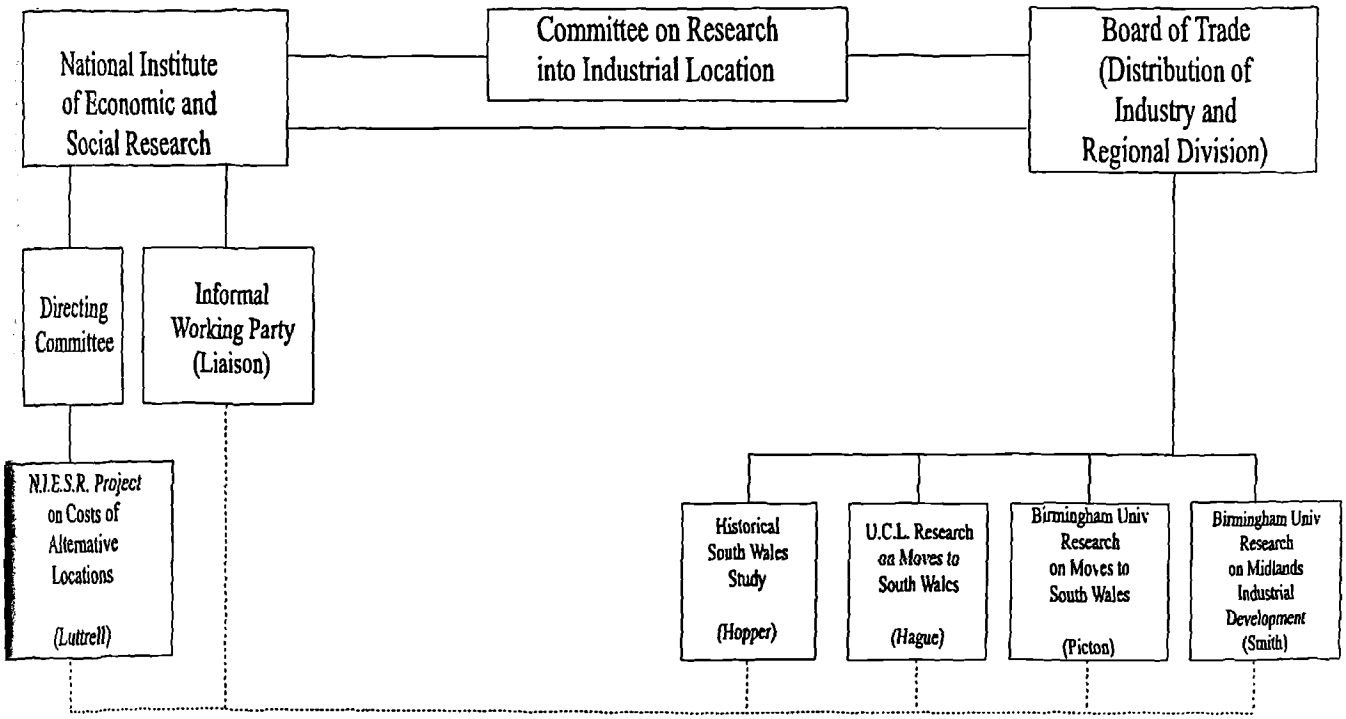
[25] Quoting from a Ministry of Town and Country Planning official, Tiratsoo (1990, p.25) highlights this point: 'The difficulty is that, although Departments can readily agree on a general policy to be followed. . . when this policy come to be applied to individual cases there are always overriding reasons why the policy cannot, at the moment, be applied. . . And those reasons are of such a character. . . that we as a department can hardly maintain our objections without being quite unrealistic'.

were unsure of specific research questions. Part of the body's duties was to establish these questions, but this broad remit initially led to conflict. In a furious exchange between an unnamed committee member and Hall of the Board of Trade, the former complained vigorously that the majority of representatives 'tacitly assumed that Development Area policy was a settled thing, and that the purpose of the research into industrial location. . . . would be merely to discover what industries could be best set up in each area and to provide employment for the people, of whatever sex, age, abilities and training, who might be found there' (PRO 1948a). But this was the point of the exercise. The Clay Committee was not designed to be a new Barlow Commission. It was designed to address specific information gaps. As a result the committee's internal debates proved technical rather than doctrinaire.

Notwithstanding the conflict surrounding Hall, the committee operated with surprising unanimity. One of the first studies to be completed was a methodological survey entitled 'Industrial efficiency and its measurement' (PRO 1951g). This was intended to provide a common analytical framework for the investigators' work. The paper championed 'unit cost' as the best spatial performance criteria, and these findings were endorsed by all committee members.

FIGURE 4.2

COMMITTEE ON RESEARCH INTO INDUSTRIAL LOCATION



Source: PRO (1951h)

By the summer of 1949 two projects, both dealing with costs at alternative locations were underway (PRO 1951h). One was at the University of Birmingham, and the other at University College London. By that time, Hopper's Cardiff based study of the South Wales area was also in preparation. Luttrell's NIESR study would be by far the most comprehensive, focusing on nationwide cost comparisons between branch and parent plants (see Figure 4.2). This would culminate in the publication of *Factory Movement and Industrial Location* in

1962. But therein lay the problem. [26] Despite some heroic efforts, the results of the earlier studies did not become available until 1951/2 (PRO 1952f). As a practical, short term guide for regional policy administration, the Clay Committee failed. By the time that the evidence was analysed, the Conservatives were in power and regional policy activism had been abandoned.

§4.4 Applying Policy (2) 1949-51

This raises the important question of what happened in the final years of the Attlee administration. Traditional interpretations have stressed the importance of the export constraint in conditioning policy relaxation. In the existing historiography, 1945-47 is seen as a 'policy-on' episode and 1948-51 as a 'policy off' period (Loasby 1965, McCrone 1969). However, it is wrong to entirely discount the dollar problem. As Scott (1996) has recently highlighted, the 1947 crisis did mark a watershed. This was because regional policy expenditure cuts reflected both economic stringencies and a growing belief that the local unemployment problem had been conquered. But the nature of the location bargain remained unaltered. Negotiations continued to centre on competitiveness, although the issues were put into sharper relief. As the case studies show, the effect was to strengthen existing trends, rather than create new ones.

An investigation into policy outcomes in 1950 revealed that 83% of all approved building cases contained a dollar advantage (PRO 1950a). But the proximate reasons for approval had not significantly changed since 1945. Table 4.5 provides a summary of 64 firms who applied for building projects in the Southern region during 1949. Of these, only 14 left Greater London, while the remainder provided 'acceptable' excuses. These ranged from a shortage of key workers (9) to pure financial loss (1). The very same arguments had been deployed by firms in the immediate postwar period. The important difference was that external constraints had become more binding than domestic concerns.

[26] Other publications to arise from the project included: Hague and Newman (1952), Picton (1953), Dunning and Hague (1954).

TABLE 4.5

FACTORS INFLUENCING THE LOCATION OF FIRMS IN THE SOUTHERN REGION, BOARD OF TRADE SURVEY, SEPT., 1949

Reasons for choice of location:	No of Firms
Firm serving only local needs, e.g. food, garages & farm requisites	26
Proximity to major markets, other than purely local (e.g. London and Midlands)	9
Encouraged by local authority	9
Suitable site available at reasonable price	7
Retention of existing labour force	4
Quick communication with a separate main works	3
Female labour available	2
Availability of raw materials	1
Reasons for rejection of Development Area - advanced by firm	
Necessary skilled/key staff would not move	9
Impossibility of training labour in time	9
Too remote from markets and business contacts	4
Transport costs excessive due to Development Areas being on perimeter of England	3
Duplication of management	3
Financial loss (costs of removal, lease too high)	1
Reasons for rejection of Development Area - advanced by departments	
Firm's employment potential too small to influence labour surplus in Development Area	4
Reasons for leaving London (14 firms only)	
Blitz/moved during the war	4
Evacuation other than above	2
New premises or other expansion too expensive	8
Lease expired	3

Notes: Based on a survey of 64 firms who applied for industrial development approval for projects other than expansion of existing works. The reasons tabulated are not mutually exclusive, and in many cases two or more arguments were put forward.

Source: PRO (1949c)

These arguments suggest a paradox. If regional policy *controls* remained stable, how do we account for the falling proportion of industrial building in the Development Areas from 1948-50? The answer suggested is that open favouritism for dollar earning firms went hand in hand with separate (often unrelated) changes in government policies and the economic environment. These included a nation-wide squeeze on industrial development, cuts in the advance factory budget, a reduction in the pool of potentially mobile firms and a changing regional pattern of comparative advantage.

The nationwide restriction in industrial building can be traced directly to the dollar shortage. Beginning in mid 1948, the government sought to reduce the strain on builders and the use of raw materials. Particularly important was structural steel, a key export commodity which remained scarce in both America and Britain (Scott 1996, p.23). At the same time, the sterling crisis forced general spending cuts. The regional policy budget fell from £12.8 million in 1947/48 (0.1% of GDP), to £11.5 million in 1948/9 (0.09% of GDP), and to £7.1 million in 1949/50 (0.05% of GDP) (McCrone 1969, p.114). As a result, the building of advance factories was stopped altogether in 1947, and did not start again until the late 1950s.

Regional policy cuts were permitted because the government believed that the domestic economic situation had changed. Whereas 1945-47 had been marked by a postwar rush for new premises, from 1948 officials noted a shortfall in applications (PRO 1949b). Although it was too early to speak of the loss of a 'sellers market', the Board of Trade became convinced that the failure was of an economic and not of a locational character. There was little general concern because Development Area unemployment continued to fall. According to Parsons (1986, p.85) this 'success' was the underlying reason why policy ran down.

Arguably, changing patterns of regional comparative advantage offer the strongest explanation for building trends. In the immediate postwar, the Development Areas had provided businesses with an environment relatively free of labour, material and housing problems. Loebl (1988) noted that the Trading Estates had little difficulty attracting tenants during these years, since many businesses were happy for any accommodation they could get away from the congested South. By 1948, many of

these regional advantages were threatened by sustained development and national restrictions. In 1949, the Board of Trade in Scotland was complaining vigorously that 'quite a large number' of migrating firms had been put off by a growing shortage of women workers (PRO 1949b). In other words, the uniquely favourable economic circumstances aiding Development Area building from 1945-47 began to dissipate by 1948-50.

Further evidence is provided by Brown (1972, p.292). He completed a systematic test of changes in policy stance and the proportion of firms establishing in Development Areas. By examining the moves in each pair of successive years from 1945-1951, he identified only two periods when there were statistically significant breaks - 1946-47 and 1949-50. Both were falls in the proportion of firms moving to peripheral areas. He concluded, 'It is not easy to connect these changes with acts of specifically regional policy'. This supports Odber's (1965, p.342) conclusion that 'a combination of circumstances, some of them temporary, made the Development Areas seem particularly attractive to industrialists in other parts of the country'.

It is unlikely that we will ever know the precise role or balance of these forces in conditioning construction patterns. However, there is enough evidence to suggest that interpretations focusing heavily on coercive regional policy are incomplete. 'Policy-off' was not preceded by 'policy-on'. Moreover, the complexities of the investment decision and the extent of economic controls suggest a highly conditional counterfactual. We do not know how investment would have behaved in the absence of regional initiatives either in 1945-47 or 1948-50. At best we can provide a well informed hypothesis. This hypothesis suggests a relatively passive policy effect. This impression is supported by evidence relating to financial incentives.

During the 1940s, the Board of Trade was highly ambivalent in its attitude towards incentives. The 1945 Act had made a clear distinction between commercially viable operations and uneconomic propositions.[27] According to the rules governing the Development Area Treasury Advisory Committee (DATAC),

[27] See PRO (1954n).

incentives (both loans and grants) could only be entertained when the committee was satisfied that the project had 'good prospects of ultimate financial success' (PRO 1954n). As a general rule, applications had to satisfy the committee that they could not obtain funds from established sources of finance. From 1947 to 1951, an average of 64% of loan applications failed to meet these criteria (Table 4.6).

TABLE 4.6

APPLICATIONS FOR DATAC LOANS, 1945-51

	Applications (no)	Rejected (no)	%	Approved (no)	%
1947	30	21	70	9	30
1948	16	8	50	8	50
1949	38	24	63	14	37
1950	43	31	72	12	28
1951	25	16	64	9	36

Source: PRO (1954n).

The Board of Trade was under constant Treasury pressure to limit the extent of assistance. So much so, that deliberate decisions were later taken not to publicise the incentive package (PRO 1951c). Where payments were made, they were designed to be of a temporary nature. This was entirely in keeping with the Board's market based philosophy, and reflected a widely held view that assistance should target transition rather than operating costs. It was only in 1949 that the Board of Trade began arguing for an extension of its financial powers to cover the 'once and for all removal expenses' of work transfer (PRO 1949g). The proposed powers included a contribution to the cost of removing plant, together with labour training allowances.

There is strong evidence to suggest that the Board was motivated in part by its unsuccessful attempts to persuade Ford to establish a manufacturing plant on Merseyside. In addition to the buildings normally provided by the government, the company had called for equipment worth £1,000,000, and removal expenses of £50,000 to be met from public funds (PRO 1949f). This was not possible under existing legislation, and the plan received a hostile reception at both official and ministerial levels. Nevertheless, by September 1949, the Board recognised that 'a

contribution to the cost of removal might be a real inducement to firms to site new projects in a Development Area' (PRO 1949g). Equally important was the Board's acknowledgement that there would be little 'political difficulty in justifying an amendment under this heading'. Eventually, the new measures were included in the 1950 Distribution of Industry Act, although they were later emasculated by Treasury pressure and the incoming Conservative administration.

The record and administration of regional policy incentives confirms several important points. First, the emphasis on maintaining competitiveness. Even when the new measures were proposed in 1949, the Board was keen to emphasise that operational subsidies were excluded. As the *Economist* noted in April, 1950:

> It is by no means clear that these powers will do any good . . . In practice it seems that the argument of trading advantage will be bound to prevail in most cases for some time to come, and this tendency could only be defeated by a quite extravagant use of the money powers under this Bill. No one supposes that the Government would be so foolish. But, that being so, can the Bill have much effect?

Second, the record suggests that left-wing radicalism was constrained by the ideological gap between Labour and the Tories. In the early years of the postwar administration, agreements reached under the coalition government circumscribed regional policy initiatives. In later years, policy makers favoured less controversial legislative instruments which could survive a change of government. This helps explain why the 1950 Bill was limited in scope.

Finally, the experience highlights the questionable role of the Treasury. In an effort to control public expenditure, a strict series of financial restrictions were introduced throughout the late 1940s. Regional policy was not excluded. But from the very beginning, DATAC had applied stringent tests to its applicants. So long as the Board of Trade and central government continued to place commercial efficiency above other criteria, the Treasury's role reinforced existing practises. This is a point ignored in traditional interpretations, which stress the exclusively destructive influence of Treasury involvement on regional development initiatives.[28]

§4.5 Policy Developments

The end of Labour's tenure coincided with the beginning of the Korean War. With pressure for rearmament and the need to convert civilian factories to military production, the Board of Trade found itself operating in a completely new regional policy environment. Generally, the rearmament programme is seen as a turning point in Britain's postwar development. As Burnham (1995, p. 344) notes, commentators as politically diverse as Hennessy and Aaoronovich have claimed that rearmament robbed Britain of an export led recovery. More recently Cairncross (1985) has argued that the depression of 1952 cannot be blamed on Britain's efforts alone, but on world rearmament which created a commodity boom and international raw material shortages.

Whatever the overall position, in regional policy terms the war changed the nature of government industry relations. It created both an opportunity and a need for further decentralisation, and in one case at least, allowed the government to put additional pressure on conservative industrialists. It also illustrated the failures of the previous five years of regional policy, highlighting local bottlenecks and labour shortages.

The decision to rearm was taken in August 1950, eventually involving expenditure of £3,879m between 1950/1 and 1953/4. As one would expect, the effort was heavily concentrated on the metal goods and engineering industries, constituting 28% of total defence expenditure from 1950/1 to 1952/3.[29] The geographical concentration of mechanical engineering in the South and Midlands created additional problems for policy makers, as they sought to match available resources with regional patterns of industrial specialisation.

Given the reluctance to impose location controls and a need for early production, the best way of matching resources to demand was through the procurement system. As early as January 1950, Harold Wilson was pressing for open favouritism for Development Areas in defence contracting. In a scheme originally suggested by the Ministry of Supply, the Production Committee agreed that preferred tenders must have a 25% Development Area content (PRO 1953b). If this condition was not met, competing bids with significant regional content

[28] See Odber (1965).
[29] Calculated from Burnham (1995, pp. 348-49).

enjoyed a 5% price preference. This was an attempt both to increase regional employment and reduce overheating. A far as the motor industry was concerned, the dominant issue became overheating.

In Coventry, the initial symptoms of overheating were a scramble for labour and a shortage of steel, but from early 1951, the situation deteriorated with small firms unable to compete in the resources auction (Tiratsoo 1990, p.26). The inevitable result was a city-wide increase in short time working. By August 1951, a Board of Trade Working Party had concluded that, '. . . the only practicable solution to the problem is the transfer of substantial blocks of work from Coventry to other areas' (PRO 1951b). This policy was first applied in the case of Standard Motors.

In 1950, Standard were approached by the Ministry of Supply in connection with a contract to supply the RAF with 650 Avon Jet Engines for the rearmament programme (PRO 1951a; MRC 1951-56a, 1951-56c). For Standard, a company heavily involved in Second World War aircraft production, the proposition made good economic sense. The firm would enjoy 'super-priority' in materials supplies and be locked into a cost-plus pricing deal which would guarantee 7.5% return on capital employed, equal to a profit of £250,000 on the first 100 engines alone (MRC 1951d). For the Ministry of Supply, the work would demonstrate that 'British gas turbines could be produced, when needed, by able automobile firms and that such engines would be to the standard required' (MRC 1955a).

Under Board of Trade guidance, Standard proposed to free space at its Fletchamstead factory by centralising some activities at a new plant in Merseyside. The rationale was to provide a self-contained machine shop responsible for the manufacture of car and tractor spare parts (MRC 1951b). The plan envisaged a workforce of 1,200-1,500, and was welcomed by the government as a 'precedent which might enable departments to persuade more motor manufacturing concerns to set up branch units in Development Areas' (PRO 1951a).

This plan marked one of the few motor industry regional policy successes of 1945-51. This was because it saw the concomitance of a financially viable programme which was in the interests of both the firm *and* regional employment. It was a special situation. As Burnham has demonstrated (1995, pp. 351-55), in less

fraught conditions and under a different administration, companies were able to manipulate the Korean crisis to win location concessions. As it was, Standard's Liverpool plant was never completed. Throughout 1951-53 the engine order was progressively cut to just two hundred and fifty units (MRC 1954). The incoming Conservative administration accepted the Merseyside plant's cancellation, and Standard retreated to its Coventry base.

The Standard deal provides a fitting footnote to regional policy experience under Attlee. It demonstrates that the will for an active distribution of industry policy existed, but was constrained by the macroeconomic environment and notions of commercial viability. In Standard's case, the Korean War changed the balance of the location bargain. For the first time, the firm's interests coincided with political will and employment concerns. With a lucrative government contract, Coventry's predicament provided Standard with an incentive for relocation. Changing economic and political circumstances ensured that this success was not secured.

§4.6 Conclusion

In January 1944, the Secretary of the Department of Overseas Trade wrote, 'the implication of the location policy is that it is worth incurring some economic loss to prevent the concentration of unemployment in certain regions' (PRO 1946i). This chapter has demonstrated that at the Board of Trade this idea was not wholly accepted. This is not to say that officials and ministers rejected distribution of industry policy, but that they kept notions of efficiency and market based solutions at the forefront of their minds.

In many respects, the relationship between civil servants and politicians was co-operative rather than confrontational. Dalton had used the Board of Trade's reputation to secure a regional policy commitment from the wartime coalition. This imposed constraints on postwar administration which Labour were happy to accept. The only policy 'failure' related to informational problems, and the limited bargaining power they created. These failings were linked directly to the amateurish nature of the pre-Fulton civil service. Throughout the 1940s, bureaucrats acquired new responsibilities for which they lacked economic knowledge. Board of Trade officials struggled to develop the understanding and

analytical tools needed to successfully challenge industrialists. The result was that regional policy became dominated by 'do-it-yourself economics'.[30] In the words of Peden (1996, p. 178), 'an amalgam of inherited ideas based on departmental tradition, the interests of departmental clients and mercantalist attitudes' dictated policy responses.

Traditional interpretations of distribution of industry policy have stressed the importance of export constraints and domestic economic circumstances in conditioning policy. In this scheme, the crisis of 1947 is said to divide a 'policy-on' episode (1945-47) from a 'policy-off' period. The evidence suggests that 'policy-on' was a myth. Economic constraints did affect regional policy, but the constant stress on commercial efficiency and market based solutions was more important. Inexperience and a lack of economic intelligence constrained Labour's ambitions. By the time that these shortcomings were addressed, economic conditions in the congested areas had eased, and the Conservatives were in power. The regional policy window had closed.

This suggests that active regional policy in postwar Britain would have required the concomitance of three factors - political will, a conducive macroeconomic background (to provide a pool of footloose industry) and effective economic intelligence on spatial cost patterns. Only with this third factor could the state effectively challenge industry to relocate. As we shall see, it was not until 1959 that these forces finally combined.

[30] A phrase borrowed from Henderson (1986)

5 Conservative Regional Policy 1951-58: a Question of Ideology

§5.1 Introduction

> It must be sometimes difficult for the Conservatives, Liberals and Socialists to agree about postwar legislation. In Town and Country Planning the Socialist and Liberals will wish to extend State interference with private trade and property much further than the Conservatives will think necessary or desirable. Many Conservatives hold that State planning can easily be carried to a point where it will impede development and impair freedom without improving anything.
>
> Lord Selbourne, Minister of Economic Warfare, June 1944 (PRO 1944a).

The 1951 general election heralded a change of government and a change of direction in British politics. It is now widely accepted that the illusion of Butskellism hid a wide range of philosophical differences between the major parties (Rollings 1994). The historiography suggests that Conservative control led to the emasculation of regional policy from 1951-58. This chapter reconsiders the period from a civil service perspective. It demonstrates how officials continued to adhere to free market principles, and were unconvinced about the wisdom of interventionist solutions. This meant that there was a fundamental continuity in approach between the Labour and Conservative administrations, and that the tactics of industrial intervention remained passive.

These arguments represent a departure from the established literature. While commentators have rightly highlighted the macroeconomic environment and the failure to adopt growth point strategy as defining characteristics of the period, there has been little investigation into the nature of intervention or the ideological reluctance to dictate location.[1] This reluctance was apparent at ministerial and official levels, and related to the rejection of location control as a distortion of free enterprise. On the one hand, the Conservatives recognised only one level of market failure, informational weaknesses; on the other, the Board of Trade remained wedded to a narrow definition of externalities. Neither officials nor

[1] For example, Scott's (1996) focus is exclusively macroeconomic.

politicians accepted an interventionist agenda, trusting in economic rationality and the invisible hand to secure regional balance.

These beliefs were deeply ingrained at the Board of Trade. Officials were not anti-regional policy and had strongly supported Labour's distribution of industry programme, but this support had been based on simple notions of social justice and an affinity with market based remedies. While officials doubted industrialists' claims, they had rarely been asked to overrule businessmen. Conservative neo-liberalism reinforced these trends. This was particularly important because empirical work during the 1950s had begun to question the efficiency of market solutions. However, buoyant economic conditions and the low profile afforded to British regional science meant that these new ideas could be ignored.

The discussion follows the framework established in Chapter 4. It begins by considering the legacy of the Attlee government and initial Conservative policy reviews. Specific policy tests are then examined and the political consequences assessed. Finally, the experiences of Dame Alix Meynell - permanent under-secretary at the Board of Trade and the official most clearly associated with Conservative regional policy administration - are used to determine the nature of policy development by 1958.

§5.2 Reviewing Policy

When the Conservatives triumphed in the 1951 general election, one could be forgiven for thinking that this marked the end of a meaningful regional policy. But even before the election began, it is clear that Labour's commitment to regional employment had been compromised. In May 1950, Wilson had produced a memorandum which examined these short-comings. It argued that the growth of employment in new industries scarcely matched the rate of displacement from existing sectors in the depressed regions. Wilson concluded,

> In these circumstances, full employment, the Ark of the Covenant in the government's economic policy, is in danger of becoming a mockery. There are already a number of areas where one cannot mention the phrase in a political speech (PRO 1950d).

This malaise was partly a result of the efficiency-first standard adopted by Labour and the Board of Trade. It would provide a mixed legacy for the Conservatives,

supplying a strong institutional and legal framework, while denying the executive an opportunity to control location. These points can be illustrated by considering the role of financial incentives and the 1950 Distribution of Industry Act.

The 1950 Act extended the Board of Trade's loan and grant powers for firms moving to Development Areas. The amendments arose from the Board's frustration at manufacturers' claims for relocation expenses. But the powers failed to have any worthwhile effect. This was because the government decided not to publicise its new authority.[2] The decision may seem curious, but it reflected an implicit distinction between discriminatory and general intervention.

The whole basis of Labour's approach was to selectively move suitable firms to Development Areas. In the 1940s, the Board of Trade had decided not to publicise DATAC's activities for fear of encouraging speculative business enquiries. This attitude was reflected in the Board's 1950 instructions to regional controllers, which empowered officials to consider only 'exceptional cases' for financial assistance (PRO 1950c). Shortly after the 1951 general election, this attitude was confirmed in a letter from Douglas-Campbell to Hyman, which explained that 'we do not want to broadcast to industry in general an impression that a full reservoir of easy government funds was available to dip into at the lightest wish' (PRO 1951c). All of this meant that in December 1950, the Regional Controllers' Conference reported that the Act had hitherto had little effect. Up to this point there had been only 12 applications for funds; 3 had been refused by the Distribution of Industry Working Party, 3 had been rejected informally, 4 had been advised that they had no case and 2 were still under consideration (PRO 1950b). Section 3 had become a 'dead letter'.[3]

Judging from departmental papers, it seems that the Conservatives were only too happy to continue with this practice. Indeed, the continuity of policy between the

[2] An unsigned memorandum from Board of Trade headquarters to regional controllers argued 'It is not considered desirable that we should take the initiative in offering to firms the inducements in Section 3 or that they should in any way be widely publicised. It is for the firm to discover the existence of the inducements and to ask for them' (PRO 1952b).

[3] The term 'dead letter' was attributed to Campling, who argued, 'I am not in the least worried by the possibility of Section 3(1) becoming a dead letter. Possession of the power to spend money on bribes does not mean that we would have failed in our duty if we did not exercise it. It would surely be a virtue if we could achieve our objects without doing so and, consistent with the achievement of our objectives, I would think our aim should not be to exercise it' (PRO 1953e).

two governments is striking. As late as 1953, a meeting which discussed three important aid applications (British Oxygen, Ransom & Makes and Super Seal Ltd) confirmed Labour's general approach. In the face of faltering Board of Trade opposition, Treasury officials succeeded in scaling down the financial requests.[4] The Treasury successfully argued that large payments should be reserved for potential 'whoppers' such as the motor firms, although officials conceded that no funding existed (or was likely to exist) for such large projects. (PRO 1953d)[5]

The picture which emerges from late 1951 is therefore contradictory. A strong superstructure existed, but policy execution had been impotent for some time. The administrative machinery executed its functions in accordance with established efficiency criteria. The effect on the Regional Distribution of Industry Panels was substantial. By late 1951, they had degenerated into little more than gentlemen's clubs, lamely examining and rubber stamping planning requests. The resulting institutional complacency was documented by Sir Godfrey Ince in February 1952. Commenting on his first regional panel meeting, he wrote:

> The meeting lasted from 10.30 am to 12.45 p.m. the atmosphere was most congenial and pleasant; all the members, including two Major Generals and one Rear Admiral were most charming to the 'new boy', and we accomplished absolutely nothing (PRO 1952c).

Labour's regional policy weaknesses bequeathed an awkward problem to the Conservatives. In June 1951, the Scottish Council had commissioned a study under the chairmanship of Alec Cairncross 'to recommend methods of promoting economic expansion along appropriate lines in county towns and county mining areas where more industrial employment is necessary and practical'.[6] Although Cairncross was a highly respected economist, he was not a regional policy expert. It seems that the lack of a strong British regional science tradition continued to hamper policy discussions.

---

[4] PRO (1953c). The applications included £66,800 for British Oxygen, £44,507 for Super Seal Ltd, and £309,308 for Ransom and Makes Bearing Company Limited. £20,000 was finally offered to British Oxygen, £60,000 to Ranson and Makes. Super Seal's request was rejected.

[5] In fact, in 1954 only 4 applications for loans were approved. Treasury witnesses to the Select Committee on Estimates in 1955 argued that financial incentives did not attract industry.

[6] Cairncross (1952). See also PRO (1951f).

The Scottish Council's actions reflected a long held belief that Scotland had been excluded from the major benefits of the postwar distribution of industry programme.[7] As early as 1946, the Scottish Office had been advocating a much more robust policy. The Scottish Office had frequently proposed more radical measures than either the Board of Trade or production ministries would contemplate, and the department frequently found itself outvoted in the regional policy committees. An example is provided by a 1946 paper prepared by Tom Fraser (Joint Parliamentary Secretary at the Scottish Office). This argued that the Government should itself establish engineering plants in areas where firms could not be attracted (PRO 1946a). Given the Board's efficiency concerns, Fraser's proposal was pilloried. An official wryly commented, '. . . it seems to me that it would be the worst possible advertisement for state enterprise, since the state would be presumably entering the field at a disadvantage since private industrialists do not regarded it as advantageous in these industries to go to Development Areas' (PRO 1946g).

Whether or not the Scottish Office's fears were justified is an interesting point. In 1946, Fraser estimated a male employment shortfall of 45,100 in Scotland (PRO 1946b). The country's share of national building starts was certainly unstable from 1945 to 1951, falling from an annual average of 14.9% in 1945/7, to 6.8% in 1950, before recovering to 11% in 1951.[8] But as explained in Chapter Three, this was probably due to changing regional patterns of comparative advantage rather than policy. Whatever the truth, the Scottish Office's lobbying reflected a real belief that the area was being neglected.

The Cairncross Committee argued for a much more active policy, based on growth point strategy rather than employment. The report's key concerns were 'to accelerate the growth of new communities in promising locations. . . to make fuller use of manpower and national resources that are in danger of being wasted and to . . . arrest the decline of communities and consequent waste of material and

[7] In an unsigned letter to the Lord President the Scottish office maintained, 'It is of course true that Scotland has suffered because the Board of Trade, who have all the cards in their hands about industrial development, have not felt the full sense of responsibility for Scotland as they do for Wales' (PRO 1946f).

[8] Calculated from Board of Trade (1955, table 4).

national assets' (Cairncross 1952, p. 41). It advocated much wider government financial powers, flying in the face of established Board of Trade practice.

The Conservatives sought to bury the report while continuing to execute the existing policy mix. Evidence suggests that officials tried to water down Cairncross' final recommendations, attempting to dismiss the investigation as a 'damp squib' (PRO, 1952d). Nevertheless, Scott (1996) has recently suggested that the report served to highlight previous policy weaknesses and an enthusiasm for growth points within the Board of Trade. Cairncross' arguments certainly featured in later policy debates, but it was departmental culture and notions of entrepreneurial freedom which dominated these discussions.

The Conservative's initial regional policy response was linked almost exclusively with the demands of the Korean War. In December 1951, an interdepartmental policy review recognised that a potential long term regional economic problem existed, but the investigation soon became bogged down in the details of administrative control (PRO 1951d). A meeting on the 3rd of December outlined the new government's approach (PRO 1951e). The Wilson formulae for giving locational preference to dollar earning firms was endorsed, as was the practice of directing defence contracts to Development Areas. The Conservatives also recognised that it would be 'politically undesirable' to deschedule any of the listed areas. In part, these decisions reflected the exigencies of 1951, but the continuation of Labour's do-nothing policy also hid a fundamental philosophical shift.

Whereas Labour had been constrained by external concerns, informational inadequacies and the commercial efficiency criterion, the Conservatives held fundamentally different views about the legitimate role of the state. The new President of the Board of Trade, Peter Thorneycroft, was to quote Seldon (1981, p. 178), 'a liberal by nature . . . He felt strongly that it was not the job of government to regulate or intervene in industry, but to lay down the ground rules within which industry should make its own decisions'. This astutely summarised not only Thorneycroft's views, but the Board of Trade's entire regional policy position. While the Clay Committee had begun to plug the information gap, the Board's narrow definition of externalities and emphasis on 'persuasion' above

'coercion' found an immediate resonance with the Conservatives. Unable to abandon its individualistic approach and unwilling to direct industrialists, the new alliance held little promise for wider policy initiatives. The Board of Trade was not asked to use its growing economic intelligence to challenge location decisions, and its officials did not come into conflict with government. A regional policy truce developed. These arguments are supported by an analysis of policy thinking in 1951/2.

Scott's (1996) characterisation of the Board of Trade as a regional policy advocate at this time rests on a number of questionable assumptions. First, that officials recognised that a potential problem existed. Of this there is little doubt.[9] Second, that the Board promoted a pro-active policy mix. This is debatable. Finally, that there was a conflict between officials and the Conservative's national economic agenda. The evidence does provide examples of clashes between national and regional concerns, but these were secondary constraints (HMSO 1955, p.12). The overriding reality was that the Board remained wedded to the same philosophical beliefs and tactics of industrial intervention that Dalton had exploited during the early 1940s.

Forward policy thinking during the first months of the Conservative government was limited. A July 1952 memorandum has been identified as a key agenda setting document (PRO 1952a). This provided five policy alternatives for the government: business as usual, focusing on black spots, growth point strategy, efficiency first, and follow the firm.[10] The memorandum recommended growth point strategy in the short to medium run , with a switch to 'efficiency first' in the long term. An accompanying document entitled 'Skeleton notes on Development Area policies' covered much the same ground, but included an important addition (PRO 1952e). This recognised that while different strategic objectives were possible, tactics must remain unchanged. Whatever the final policy aim, entrepreneurs must be left free to determine their own location.

---

[9] See Alix Meynell's oral evidence to the Select Committee on Estimates in 1955 (HMSO 1955). When asked about descheduling areas she noted several potential blackspots (q 12).

[10] 'Efficiency first' was not a commercial argument, but promoted a geographical distribution of industry which would achieve the most efficient combination of factors of production. This proposal bore the most similarity to Barlow's original recommendations.

According to Scott, the defining moment came when the government chose to pursue 'black spot' policies. This denied the outer regions an opportunity to modernise their industrial structures and foster long term stability. In short, the Conservatives favoured a national economic framework at the expense of regional initiatives. But given the Conservative and Board of Trade philosophy, this outcome was inevitable. Intervention would be focused on information and persuasion, and the Board would educate rather than challenge businesses. These ideas were in operation by 1952, and fully articulated by 1953.

The key document in explaining policy ideas was therefore not Ilet's 1952 paper, but a 1953 internal document headed 'The future of industrial development policy' (PRO 1953g). By this time, the Conservatives had succeeded in dismantling many of the physical controls identified with the Attlee governments. Building licences were not abolished until 1954, but they proved much easier to obtain after the Korean armistice. In his 1953 budget speech, the Chancellor outlined this new policy environment, 'No manufacturer should now find difficulty or delay in getting a licence for productive work'.[11]

TABLE 5.1

BUILDING LICENCE EXEMPTION LIMITS (£ per year), 1945-54

		Industrial and agricultural building	Warehouses schools and some offices	Other building including housing
1945	August	20	20	20
1948	July			100
	November	1,000	1,000	
1950	February	500	500	
1952	July		200	
1953	January	2,000	500	500
1954	January	25,000	1,000	1,000
	November	control ends	control ends	control ends

Source : Dow (1964, p.150).

'The future of industrial development policy' was prepared for internal use at Board of Trade headquarters. It was fifteen pages long, and carefully dissected the

[11] Quoted in (PRO 1953g).

relationship between location control and entrepreneurial freedom. It examined both the advantages and disadvantages of location control in relation to the special problems of London and the Midlands. It asserted that so long as the Board 'continue to operate a nation-wide distribution of industry policy. . . the IDC system must be continued in something like its present form' (PRO 1953i). This position was justified not in ideological terms, but by the valuable information which the system generated and the contacts it established between the Board and individual manufacturers.

The paper continued by examining the case for altering the 5,000 sq. ft limit, and restricting IDCs to certain areas only.[12] Section 16 of the document ran to five pages and dealt with the relationship between distribution of industry policy and the New Towns programme. This conflict has been usefully summarised by Cullingworth (1979, pp. 116-62) and Scott (1997), and the details need not concern us. Suffice to say that the debate centred on the precise definition of 'reception areas', and the Board's belief that potential migrants were in short supply. But in general, the discussion added little to current practice. It simply outlined preferred IDC positions for most projects and areas. The document's main proposals were that:

- all IDC applications need to be considered on merit.
- IDCs should not be refused if the development can clearly not be carried out elsewhere.
- IDCs *may* be refused if the applicant is 'quite obviously not prepared to go elsewhere although we consider there are no valid reason against his doing so.'
- If the Board is satisfied that a development must be undertaken in London , the Board should encourage the development as a good thing. Developments should only be discouraged where the decision is 'sensible and capable of defence'.

It is difficult to separate these tactics from those operating throughout Labour's period of tenure. Even within the document, the Board recognised that the previous rigid policy had produced few refusals (PRO 1953h). No regrets were

[12] In the former case, it favoured greater flexibility by allowing limits to be established by regulation rather than legislation. In the latter case, the document made some familiar points. First, it recognised that 'many of the incidental advantages of an IDC arise not from the ability to refuse an IDC, but from the act of considering an application and the opportunities for consultation'. Second, it noted the potential political problems associated with descheduling areas. In the light of these dangers, it recommended keeping controls on a national basis.

expressed over this situation, and none of the proposals advocated substantive change. Notwithstanding the loss of building licences, the emphasis would continue to be on persuasion.

The entire policy exercise seems rather meaningless. It succeeded in merely codifying existing practices within a tighter administrative framework. These findings provide an interesting question for postwar policy analysis. *If* the Labour Party had been more committed to industrial steering, and *if* there had not been such a powerful export constraint, would politicians have been able to override civil service conservatism? During the 1940s, this problem did not arise. In the 1950s a new truce developed based on common intellectual and political philosophies. In Thomas' (1959, p.20) words, 'the Establishment' and its 'Victorian views and standards of judgement' remained inviolate. This impression can be confirmed by a detailed study of key location decisions.

§5.3 Applying Policy

Once the Conservative guidelines had been established, an ideal candidate to test the new system emerged. In the space of a few months, the motor industry provided a wave of expansions which forced the government to confront business leaders (see §3.5). These test cases were part of the second wave of postwar motor industry investment beginning in 1954, with most major car manufacturers announcing expansion plans. While the Nuffield-Austin merger had made it possible for BMC to achieve substantial additions to output with little outlay, other firms were not so lucky (Maxcy & Silberston 1959, p.182). Faced with the end of the world-wide sellers market, Rootes, Ford and Vauxhall needed to expand. The underlying logic behind these moves was fordist - best summarised in a 1955 briefing paper prepared by the Ministry of Supply:

> It might seem strange, having regard to much keener competition from abroad, that an industry which is doing so well should want to enter into such heavy additional commitments but, in fact, the volume manufacturers had not got much choice. They were compelled to undertake this expansion in order to retain their competitive power and the key to this was economic volume production, or, in other words, the production of say 10 cars at the cost of 7 today (PRO 1955c).

The first companies to submit plans to the Board of Trade and Ministry of Supply were Ford and Vauxhall. The Ford plan envisaged a total investment of £30 million spread over four projects (PRO 1954f). The first was a new central spares and distribution department, requiring approximately 300,000 square feet of industrial space and 500 workers. Ford's preferred site was Aveley in south east Essex, close to the London docks where 90% of Ford's imported spares arrived. Ford also required a spares manufacturing unit, and proposed using 330,000 sq. ft at Langley Airfield where the company already enjoyed a presence thanks to an earlier location deal. The final two proposals related to overspill production units, and a need to free floorspace at Dagenham. Ford wanted to lease three buildings from the Ministry of Supply at Woolwich Arsenal in London, where the Royal Ordnance complex had recently been closed following defence reorganisations. Two units were nominated for transfer, involving some 2,200 workers. Altogether, Ford's plans called for a total of 700,000 square feet and 3,000 additional jobs.

Vauxhall's scheme was far more dramatic. The proposal was submitted approximately eight weeks after Ford's, and involved two projects. The first was for an entirely new factory to be built at Dunstable, involving 1,150,000 square feet and 5,500 additional workers. The second scheme called for an extension of the company's existing site at Luton, with 500 new workers housed in an additional 1,550,000 square feet of factory space. In total Vauxhall had requested 2.7 m square feet, and 6,000 additional workers.

Board of Trade officials noted with some alarm that these projects had 'far reaching implications for distribution of industry policy' because all of them were located within the Greater London area' (PRO 1954f).

If we take Ford's proposals first, we can identify the individual issues which concerned government. The first point is that the Aveley scheme was always uncontroversial. This would have been true under both Labour and Conservative administrations because it was a case of 'tied' development.[13] The Woolwich

[13] Meynell explained the Board's position in these circumstances to the Select Committee on Estimates (HMSO 1955, q.70): 'We have to think of the economic considerations obviously: whether it is economical to "hive-off" a unit and take it elsewhere, and the problem for an

proposals were different. When the Royal Ordnance factory closed, the government had reluctantly agreed to a trading estate. The understanding was that the site should be reserved for 'non-conforming' local industry, which could not find alternative sites because of local planning restrictions (PRO 1954d). The decision to close the Arsenal had been extremely unpopular, and was only sweetened by promises of further engineering employment and personal assurances from the Minister of Supply (PRO 1954e). However, Ford's proposal represented something entirely different - a move towards central London in violation of distribution of industry and new town policies. The package therefore offered a valuable test-case, pitching entrepreneurial independence against the wider planning issues that had dominated postwar Britain.

The Vauxhall case raised similar, albeit less strident objections. Again, the proposal was against general policy, but it was more sympathetic to the new towns strategy. The suggestion was even made that Luton and Dunstable might be redefined as an 'expanded town', should the government wish to capitalise on Vauxhall's investment programme (PRO 1954r). But notwithstanding this proposal, the area continued to display the very symptoms of overheating which Barlow had railed against.

A note by M.A. Cross in December 1954 underlined Luton's critical labour supply problem. Cross noted that small firms could not pay the large wages that Vauxhall generated, while skilled apprentices often left smaller business to work in the giant car plant. Summing up, she found worrying evidence of overheating and trade dependency:

> I think the general position in Luton is that everything is overshadowed by Vauxhall, which is all right so long as they are booming, but if there should be a slump in that direction Luton would have a very bad time. I was recently told by a Luton resident that children who find their toys are not so good or numerous as their play fellows are apt to ask their mothers, 'Why doesn't my daddy work at Vauxhall's?'(PRO 1954s)

---

existing industry is much greater than if you are dealing with a new firm trying to come into the London area or developing in the London area. . . what we try to do in discussion with the firm is to discover whether there are real economic reasons why they should stay'.

These arguments foreshadowed later complaints from the FBI. These centred on physical building restrictions, including the sewage and water problems which were crippling smaller Luton businesses (MRC 1955-56b).

Subsequent discussions at the Board contained echoes of earlier location bargains. Just as in the late 1940s, Ford and Vauxhall emphasised the production efficiencies generated by expansion, the two companies finding a willing advocate in the Ministry of Supply. The Ministry's recommendations were unequivocal, it noted that both companies faced, '. . . extreme competition on both price and quality. Ford already has success, and consolidation will reap foreign currency and prestige rewards. But we cannot ignore the fact that other countries have had the advantage of building new facilities and any measures we might take that even marginally reduced the competitive ability of a major exporting organisation will damage our chances of securing that dividend' (PRO 1954e).

Within these terms, the government devised a careful negotiating strategy. In Ford's case, the Aveley proposal was to be agreed, and the Woolwich move resisted (PRO 1954e). The preferred option was for one of the overspill production units to be placed in Harlow or one of the other new towns, while the Langley spares unit would be decentralised to a Development Area. Mindful of Standard's recent Merseyside failure, a site at Southport was suggested for this new facility. However, both the Board of Trade and Ministry of Supply adopted a vital caveat: Ford should not be *forced* to change their plans. The government's solution would be put to the firm, but coercion would not be used. A briefing paper made the point succinctly, 'Can we, or should we, pit our amateur judgements against about the effect of given location on costs against companies prepared to back their investments to the tune of £25-30 million?' (PRO 1954f)

It was against this background that Thorneycroft met Ford's representatives, Sir Roland Smith and Sir Patrick Hennessy, on 27 July 1956 at Millbank (PRO 1954, g). Hennessy was permitted to make his case, explaining that Dagenham's design limit was 800 units a day, but the plant was now running at 1250, and was still unable to met demand. According to the official minutes, the President accepted all that Ford had to say before mentioning location. Hennessy argued that the firm 'was aware of concentration diseconomies, and had also considered the defence

argument.' Ford had examined South Wales, Merseyside and Northern Ireland, and considered them all 'unsuitable'. Hennessy supported this argument with a deception, noting how '. . . the company had originally been established at Manchester and had intended to set up production on large scale at Southampton, but had been persuaded in view of the housing and labour position at Dagenham to set up there instead'.[14]

Hennessy and Roland Smith were obviously very well briefed, but their efforts were largely wasted. This was because Thorneycroft had no intention of forcing the location issue. A similar strategy was used with Vauxhall (PRO 1954h). Here the Ministry of Housing and Local Government wanted the firm to consider establishing a satellite manufacturing plant in a London New Town. Vauxhall Vice Chairman, Hill, replied that a feasibility study had already identified Stevenage as a likely candidate for transmission manufacture. But Hill added that Vauxhall would prefer not to build the plant at the present, 'but *if pressed* would comply with the President's wishes'. Thorneycroft's reply was simple. He told Hill that the government would not press the company 'to do anything that was uneconomic'. The IDC for Luton was approved, and the opportunity for decentralisation was lost. Unlike the 1940s, the location bargain had been sabotaged by philosophy rather than informational problems. Vauxhall was a reluctant but willing migrant; it was the government that resisted relocation.

Throughout both the Vauxhall and Ford applications, officials stressed the long-term implications of the decisions. Minute papers recognised the need for IDCs to be applied 'equitably and effectively', and they suggested that government sanctions would make future IDC administration difficult. One official asked (PRO 1954f) 'If these large firms cannot face the cost of one unit outside the Greater London area, how are we to argue that smaller firms can?'

But this did not create a crisis. This was because government and civil service moved in step. There are two key exchanges which illustrate the predominantly conservative Board of Trade ideology. The first was between Dame Alix Meynell and Thorneycroft, and centred on administrative implications. Meynell suggested

[14] See Nevins and Hill (1957) for a more accurate account.

that the time had come to make a change in general policy, since there was both low unemployment and much government building work in the Development Areas. She suggested that IDCs should be removed from the Town and Country Planning Act when it came to the Lords in October. The Board would then rely on persuasion, where progress was possible, although 'it was blatantly not going to be as effective' (PRO 1954i).

Meynell's own recollection confirms the official record (1988, p268). She explains how she argued that the size and influence of firms should not affect IDC decisions and that if the policy was only applied to smaller firms, it would be ineffective. This prompted her to call for the abandonment of the whole scheme.

The second key exchange occurred at the same meeting and involved the Board of Trade's Parliamentary Secretary, Henry Strauss, and his boss, Peter Thorneycroft. On the general question of location, Strauss betrayed the Conservatives' very narrow conception of externalities. He argued that IDCs had predominantly social aims and cut across economic considerations. Accordingly a strident distribution of industry programme, along Barlow's lines, 'could only be afforded by a richer nation than this' (PRO 1954i).

These arguments mirror those of the Conservative members of the wartime coalition who refused to accept that private location decisions had wider economic implications for social overhead capital, congestion costs and resource allocation. There was an implicit belief that decentralisation caused private economic penalties, and that these were unacceptable in a free market economy. This was the very argument that former economist Douglas Jay had challenged throughout the 1940s, and one which he pressed upon Thorneycroft to little effect:[15]

> It has always seemed to me that great as the social effects of the Development Areas policy are, the real case for it is mainly economic. To put it briefly, it rests on the fact that the cost of building a factory for, say 1,000 people to work in, is far less than that of building the houses, roads, schools, etc. for the families of those thousand people to live in.[16]

[15] Jay had joined the Board of Trade in September 1943 as Dalton's personal assistant and special advisor on postwar reconstruction.

[16] PRO (1953f), Jay continued, 'Therefore we must get greater economy and greater productivity over the whole country if we locate in areas of unemployment those enterprises which can operate equally economically in one of several places. In periods of restricted investment and in a country with localised unemployment, this argument is surely very strong'.

Although Jay later commented (1980, p.112) that he encountered 'mercifully little doctrinaire opposition in the Board of Trade to the idea of some government steering of the location of industry' during the Attlee years, this was because commercial efficiency remained inviolate. Under the Conservatives, philosophical considerations strengthened the laissez faire proclivities of officials. Whereas Labour favoured intervention when conditions allowed, Thorneycroft rejected all suggestions of coercion. The record shows how officials backed his approach.

The Ford and Vauxhall episodes ended with Conservative ideology enshrined in policy practice. The President had decided that the government would not refuse IDCs and would not force firms to relocate. There would be no formal end to the control, but it would become 'a dead letter' in all practical terms (PRO 1954i). Little did Thorneycroft realise that within a few months this decision would be tested to the full when the Rootes organisation submitted an application for vast new building works in the already congested Luton and Dunstable area.

The Rootes proposals shared all the characteristics of the Ford and Vauxhall plans. Based on the same fordist logic, it was a three stage scheme involving the addition of five new manufacturing bays within a year, and a new building for spares manufacture and storage soon afterwards. Stages one and two would add 3,080 to the workforce and stage three a further 5,500 (PRO 1954j).

In preliminary meetings, the Rootes brothers produced as compelling a case as either Ford or Vauxhall. They argued that their schemes were vital for the long term future of the Rootes organisation, and that labour bottlenecks could be easily overcome.[17] When pressed over decentralisation, Rootes noted that Northern Ireland and Newcastle had already been considered as possible sites, but the company had concluded that 'it would be impossible to set up a press shop efficiently so far away from their main centres'(PRO 1954j).

[17] The minutes noted how Reginald Rootes argued that the motor industry still faced labour bottlenecks, but that it had always managed to secure additional labour. He argued that Commers, the Luton firm, 'were still receiving applications, and the manager was sure that they were not poaching workers. This was because workers were coming from as far away as Leicester to Coventry' (PRO 1954j).

As far as the government was concerned, this case created real problems. According to Thorneycroft's criteria, Rootes had shown that decentralisation would be uneconomic. However, expansion in Luton and Dunstable would create severe physical problems, particularly in relation to labour, housing and water (PRO 1954o). Although these were strictly local planning issues, ministers wanted to present a consolidated front to businesses. Moreover, problems of housing and water supply could easily be interpreted in terms of overheating and congestion. This division between physical planning and distribution of industry policy has been highlighted elsewhere (Self 1961, pp. 141-42), but in Luton the issues clashed head-on.

However, there was another important complication. Rootes was a wholly owned British company, Ford and Vauxhall were American subsidiaries. To refuse Rootes permission to expand while simultaneously allowing the other schemes would raise serious policy issues. Not unreasonably, this 'patriotic' element was forcefully stressed by the Rootes brothers (PRO 1954t).

Since the 1950s, several authors have focused on the British government's attitude to American car companies. Hodges (1974) and Wilks (1984) concentrate on the 1970s, but Reich (1990) takes a much longer term view. Reich contrasts Britain's welcoming attitude with that of postwar West Germany, and this is used to account for the different fortunes of the indigenous motor makers. Reich suggests that British governments seriously damaged domestically-owned firms by their open-door policies. The IDC issue adds another dimension to this argument.

Minute papers show that ministers and officials were mindful of Rootes objections (PRO 1954k). Two elements need to be considered when analysing these events. The first is that foreign multinationals were quite capable of threatening the Board of Trade with overseas relocation. GM, Vauxhall's parent, did just this in 1954, informing Thorneycroft that they would lay down another production line in Germany should their proposals be blocked. As a briefing paper noted, 'This warning cannot be dismissed in the light of General Motors imperial outlook and resources' (PRO 1954f). However, such threats were not beyond British companies. The earliest record of such an ultimatum was in 1946, when Morris Motors threatened to relocate from Oxford to Europe, 'if the labour position were

not improved by the provision of housing on a very large scale' (PRO 1946h). Happily, this threat was forestalled by the departure of nearby Pressed Steel to a Royal Ordnance Factory in Scotland (SRO 1946-60).

The second point is the apparently different attitudes towards government relations in American-owned firms and their British counterparts. An official remarked in 1954 that, unlike Ford or Vauxhall, 'Rootes do not bring their problems to us until they are pretty well hatched out' (PRO 1954u). Moreover, the whole Rootes approach was more confrontational, presenting the Board of Trade with a *fait accompli*, rather than engaging officials in (albeit spurious) negotiations and site studies. This raises many questions about business practices and the suitability of British business structures for government negotiations. It also focuses attention on Chandler's (1990) much repeated charge that British firms continually failed to develop managerial hierarchies as deep or as well trained and professional as those in America. Whisler makes the point well (1995, pp. 16-17):

> It could be expected that as a corporation grew from its small entrepreneurial origins administration would evolve from the 'one man show' into, first, a centralised, integrated, functionally-departmentalised structure and, then, if it diversified, into a multidivisional organisation. Similarly corporate strategy would be increasingly delegated by the entrepreneur or dominant figure to the 'technostructure' composed of the Board and senior managers. However, the histories of the Nuffield Organisation, British Motor Corporation and Standard Triumph [not to mention Rootes] illustrate the persistence of personal management throughout the 1940s, 1950s and 1960s.

In terms of this thesis, the important issue is the location bargain. Although serious, these issues find their ultimate test in the third wave of postwar motor industry investment. This is because in the mid 1950s the Conservative government and Board of Trade proved unwilling to challenge even the Rootes brothers' claims, acquiescing to demands despite the physical problems.

The anatomy of the Rootes decision is familiar. Objections from the Ministries of Labour and Housing were forwarded to the Cabinet's Economic Policy Committee (PRO 1954p). However, the greatest weight was placed on the Board of Trade submission, which argued that the case should be decided on its own merits. The Board also maintained that relocation would be uneconomic, and,

given the favourable treatment received by Ford and Vauxhall, Thorneycroft favoured approval.[18] In a clear reference to earlier precedents, the Ministry of Supply added, 'If such an expansion implies change in location of industry policy, *then that change has already been made*' (PRO 1954l). Even before the Economic Policy Committee debated the issue, Henry Strauss had confidently told the Commons:

> It is impossible to keep a great industry in a strait-jacket, or to ignore its existing location. . . I am sure that the House should never make the mistake of assuming that we can drive an industry into another area merely by refusing it permission to expand where it wishes to expand. An industry which has proved itself efficient is not the worst judge of the conditions of success (PRO 1954l).

By the 21st of December, the President had approval to issue an IDC to Rootes. But there was never any intention of refusing the firm (PRO 1954m). The pattern had already been established by the Ford and Vauxhall cases. It would be Luton's smaller businessmen who would have to live with the economic consequences of this decision.

Here again, the role of the FBI is instructive. Ideologically opposed to economic controls, it nevertheless displayed a marked ambivalence toward IDCs. By the mid 1950s, location controls were the only remaining physical restraint on investment (Dow 1964, pp. 144-77). But from 1953 onwards, the FBI's attention was focused on the Government's national economic policies. According to Blank (1972, p. 126), the FBI's basic theme was that persistent inflation in postwar Britain resulted from an excess of demand created by public spending. From 1947 onwards, it argued for budgetary restraint and the reallocation of resources to the private sector. These macroeconomic concerns mirrored the growing Conservative stress on national issues.

However, the regional policy relationship was much more complicated than this suggests. Mercer (1995) has convincingly demonstrated that historians, particularly Middlemass, have consistently underestimated the role of employers organisations and trade associations in the policy community. In her study of

[18] See PRO (1954v): 'We have approved Vauxhall and Ford, and Rootes have been in the area longer and are British. First come first served is not a way out of the difficulty'.

postwar competition policy, Mercer shows how powerful business interests and organised labour were the real forces shaping legislation. Within this framework, the business veto was the most critical factor. Extending this analysis to regional policy, it is surprising that the FBI put so little pressure on Labour and Conservative governments to abandon IDCs. The explanation is that the FBI were willing to tolerate a control which had proved impotent long before 1954.

The evidence for this view is contained, not in official Board of Trade papers, but in the CBI Predecessors Archive (MRC 1950-1960b). Surviving documents show that businesses were well advised of Thorneycroft's decision to relax IDC administration (MRC 1957a). Although private correspondence was an important communication channel, ministerial statements and first hand experience had already convinced the FBI of Thorneycroft's passive intent.[19] Thus a draft circular produced for the FBI's Distribution of Industry Committee in January 1956 noted that, 'a feeling is current in some industrial circles that the location of industry policy pursued by the Board of Trade, *sound enough in itself*, does not go far enough to meet the requirements of an industry in search of new locations in which to expand' (MRC 1956a). Here one sees that coercion was never an issue, and that businesses reflected the Board's view that information was the most important locational commodity.

FBI committee documents dating from 1955-8 testify to the generally passive effect of IDCs. It was already well understood that while refusal might be used as a threat, '. . . if the applicants kept on long enough the certificate was granted' (MRC 1951e). The business lobby's main concern was the relationship between certificates and local planning. Echoing Peter Self, FBI members seemed unable to

[19] For example; 'The use of this (IDC) control cannot compel industry to particular places. It would be quite wrong if it could. All that we can do is, in the last resort, to refuse permission to expand or start an industry in a given area. The power must surely be carefully used, because it would be a very serious thing to say to an industry "you cannot build here". The proper location of a factory is something far more complex than it looks on a planning map. There is an infinite variety of factors involved, such, for example, as transport, access to raw materials, markets, the type of labour, availability of skilled management or managerial staff and technicians, and the nearness to other processes. These factors should never be, and have not been brushed aside, and for that reason we have got to be quite sure when we refuse Industrial Development Certificates. In our view far more is achieved, and far more goodwill is created in the Development Areas, by persuasion than by compulsion'. D. Kabery, Parliamentary Secretary to the Board of Trade in the House of Commons on 2nd May, 1955. Quoted in MRC (1955c).

separate location of industry concerns from planning responsibilities. The overheated situation in Luton raised particular worries, but rather than criticise the laissez faire distribution programme, local board members pressed for housing development to relieve labour bottlenecks (MRC 1956b).

The FBI's South West Regional Council probably summed up the employers' position most succinctly (MRC 1957b). While recognising that political needs required the retention of control, it advocated larger exemption limits and a link with local planning rules. These proposals represented a changed emphasis rather than a changed philosophy. They also disguised the fact that the government's negotiating position had been fundamentally compromised. Since Board of Trade threats were no longer deemed credible, businesses viewed IM6 as a nuisance, rather than as an adversary. The results can be seen in the record of refusal rates (Table 5.2) and inter-regional industrial movement (Table 5.3).

TABLE 5.2

INDUSTRIAL DEVELOPMENT CERTIFICATE REFUSALS, 1954-59

	Year	No of Schemes	Area '000 sq ft	Male Employment	Total Employment
South East Region	1954-56	4	109	370	680
	1957	5	326	500	980
	1958	37	1,893	3,330	4,680
	1959	88	2,060	2,060	3,710
West Midlands Region	1954-56	4	238	210	260
	1957	nil			
	1958	8	201	570	740
	1959	38	1,509	960	1,930

Source: Statistics provided by Brian Ashcroft.

The first set of statistics provide details of IDC refusals by district, and although they are incomplete, the dataset clearly shows the passive policy stance of 1954-57. A total of 13 refusals during these three years in the South East and West Midlands regions clearly marks the period as a continuation of 'policy-off'. Moreover, these projects involved a total of just 1,920 jobs and 673,000 square feet, suggesting that it was only a small proportion of the smallest schemes which were targeted.

Statistics on industrial movement support this view (Howard 1968). These show that the share of the 'peripheral areas' in the national total of moves declined from a yearly average of 49.6% in 1945-51, to an average of 24% in 1952-58.[20] The equivalent shares for associated employment were 64% and 30.3% respectively. Although superficially convincing, these figures have strong limitations.[21] Moreover, they say nothing about the policy effect. In keeping with previous analysis, it is possible to argue that they show nothing more than changes in regional comparative advantage over time.

TABLE 5.3

MANUFACTURING INDUSTRY, REGIONAL MOVES BY DESTINATION, 1945-58

Year Established	Peripheral Areas			United Kingdom		
		Employment (000's)			Employment (000's)	
	No. of Cases	Male	Total	No. of Cases	Male	Total
1945-51	463	133.8	237.3	933	218.7	373.2
1952	22	4.7	7.0	79	23.9	35.5
1953	33	10	18	122	27.8	43.4
1954	27	3.4	6.3	118	21.8	35.6
1955	25	6.2	10.1	147	31.6	44.6
1956	36	7.9	12.6	149	23.3	38.7
1957	25	7.8	12.5	90	17.4	28.1
1958	22	6	8.1	84	14.4	20.2

Source: Howard (1968, p.39)

But these statistics do reinforce the anecdotal evidence from FBI records. They suggest that the administrative precedents established by Conservative ministers emasculated an already weak coercive regional policy. The suggestion is that this mirrored shared philosophical beliefs amongst officials and politicians. It is therefore vitally important to justify the implicit view of civil service orthodoxy. This can be done by examining the career and beliefs of Dame Alix Meynell, the

[20] Howard's peripheral areas included Scotland, Wales, the Northern Region, the North West and Devon & Cornwall.

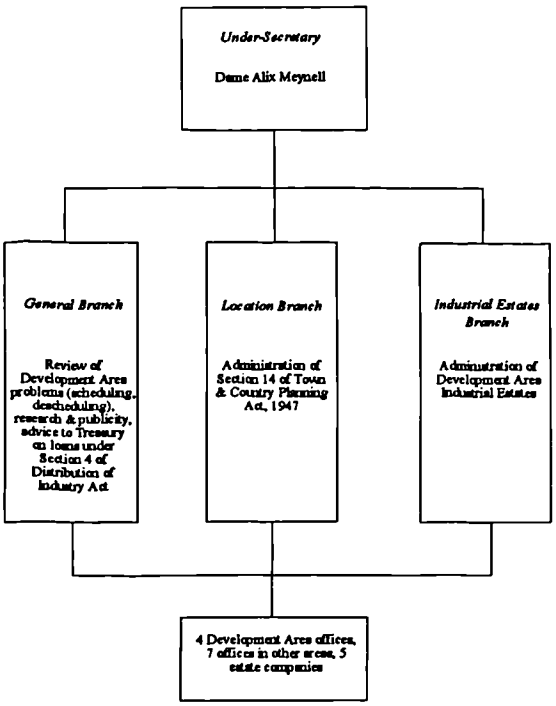
[21] For example, the figures do not include the opening of an establishment by an entirely new firm. To qualify as a move, the firm had to employ ten or more people. A move was only registered if the move crossed one of the specified boundaries between 50 designated areas. To quote Howard (1968, p.5), 'The data analysed here do not therefore cover all new establishments opened by existing firms in new locations and the total amount recorded would have been different if a different set of boundaries had been adopted'.

official most clearly associated with distribution of industry policy throughout the mid 1950s.

§5.4 Policy Developments

Dame Alix Meynell was a career civil servant, with over ten years of Board of Trade experience by 1939 and a solid public school education. Her involvement in the distribution of industry programme began in 1942, when she was transferred from the Import Licensing Branch to the Control of Factory Space and Storage Premises (C.F. & S) section. A period in the Board's Reconstruction Department soon followed, during which Meynell helped to frame legislation for Dalton's 1945 Distribution of Industry Act. After periods of dealing with clothes rationing and the GATT negotiations, Meynell was seconded to the Monopolies Commission in January 1949. She returned to the Board in March 1952, when she assumed control of IM6 with the rank of under-secretary (Meynell 1988).

FIGURE 5.1
INDUSTRIAL AND MANUFACTURES DIVISION 6 - INTERNAL ORGANISATION, 1952



Her experience spanned policy formation *and* policy administration. On the one hand, she originally suggested linking building certificates to IDCs, on the other, she assumed ultimate responsibility for regional policy execution from 1952-55. Meynell's views therefore provide a unique insight into Board of Trade ideology. Internal working papers, periodical articles, and Dame Alix's autobiography confirm the Board's status as a conservative regional policy advocate.

Meynell always favoured an industrial location programme. Her initial involvement with C.F. & S was enthusiastic, and on receiving her IM6 appointment she commented , 'The job was one in which I could put heart as well as head. Indeed, it commanded the enthusiasm, even a sense of mission of all the staff' (Meynell 1988, p. 266).

Meynell justified the Board's location interests in terms of informational failures and entrepreneurial reluctance. In a paper prepared for an international conference on regional development initiatives, she noted how interwar attempts to attract industrialists to the Special Areas had failed. Her report described how 5,800 companies were contacted in an attempt to promote new locations, but only 700 bothered to reply, and of these, only 12 undertook 'even to consider the possibility

of establishing a branch in the Special Areas'. Quoting from the Commissioner's report, she added, 'There is little prospect of the Special Areas being assisted by the spontaneous action of industrialists now located outside these areas' (PRO 1957a).

In these terms, IDCs fulfilled a critical role. Although designed to control congestion around London and the Midlands, they made it impossible for firms to contemplate expansion without coming to the attention of the state. A recurrent theme throughout Meynell's writing was that this allowed the Board of Trade to exert pressure on industrialists to look further afield. Meynell was particularly keen on the role of information. Quoting from Lord Chandos, she stressed this point in a 1959 article in *Public Administration.*

> We have collected a great deal of information regarding the relative advantages of different sites in different parts of the country, and of the facilities available there with regard to local labour supply, housing accommodation, transport facilities, electricity, gas, water drainage and so on, and as a result are now able to offer to industrialists a service of information which has never been available before (Meynell 1959, pp. 13-4).

Meynell made a clear division between coercion and persuasion. She favoured positive inducements while recognising their limitations. But she was very reluctant to countenance IDC refusals. Her views were reminiscent of Thorneycroft's:

> Experience has shown that both sets of powers are needed to give full effect to the government's distribution of industry policy. . . the two powers need to be used in conjunction and can be a valuable means of persuading industrialists to consider expanding in a Development Area rather then elsewhere. . . bare refusal, might well be followed by the industrialist acquiring existing industrial premises where he is at the risk of overcrowding or even of postponement of his expansion (PRO 1957a).

As head of IM6, these opinions reflected departmental policy. It is also interesting to note that the only conflict between Meynell and Thorneycroft concerned the former's wish to abandon IDCs in the wake of the Ford decision (Meynell 1988, p. 268). But whereas Meynell was a civil servant and concerned with administrative simplicity, Thorneycroft was a politician. Conservative Central Office had realised long ago that it would be politically impossible to *formally* abandon Labour's distribution of industry measures.

Meynell's views dominated Board of Trade thinking throughout the mid 1950s. At her retirement dinner, she emphasised the importance of viewing distribution of industry policy 'as a service rather than as a control' (PRO 1955b). This fitted in perfectly with Conservative ideology. It is therefore ironic to discover Dame Alix claiming credit for the dispersal of the motor industry to Scotland and Merseyside in the 1960s. As we shall see, these successes relied on coercion and a successful ideological challenge to postwar orthodoxy. Both of these concepts remained anathema to Board of Trade officials before 1958.

§5.6 Conclusion

The previous chapter ended by arguing that active regional policy required the concomitance of three factors - political will, a conducive macroeconomic background, and effective economic intelligence on spatial cost patterns. This chapter has suggested that political will - embodied in Conservative philosophical convictions - explains the passive policy stance from 1951-58.

Negative controls involved a degree of intervention which officials and politicians were unable to accept. The constant stress on persuasion betrayed a reluctance to enforce solutions on entrepreneurs. The wartime policy discussions had demonstrated that this was a natural consequence of Conservative ideology. For Board of Trade officials, the reluctance to dictate location represented a form of doublethink. On the one hand, civil servants recognised both the informational failure which afflicted location decisions, and the social benefits which relocation afforded; on the other hand, they remained wedded to the idea of market based solutions.

These arguments challenge traditional interpretations of Conservative regional policy administration.[22] They suggest that McCallum (1979, p.9) was right to stress Thorneycroft's ideological 'predisposition' in explaining government actions. While the macroeconomic environment permitted 'policy-off' to develop, the most important long run constraints were economic orthodoxy and an individualistic outlook. These issues were only addressed during the third wave of motor industry investment which began in 1959.

[22] E.g., Odber (1965), Parsons (1986), Scott (1996),

6 Conservative Regional Policy 1959-64: a Question of Expediency

§6.1 Introduction

> Our policy, which is out of date, is governed by a number of Acts which greatly confuse the public. The problem is what powers do we need on the assumption that an overall deficiency in demand leading to massive unemployment will not reoccur and that technical change will create, in the future, more rather than less local unemployment. . . There is new ground to be broken here. It is a fascinating subject and one on which the Conservative Party could prepare something really striking and worthwhile.
>
> Letter from David Eccles, President of the Board of Trade, to Harold Macmillan, May 1959 (CPA 1959).

The period from 1958 to 1964 witnessed a transition from passive regional policy to full scale interventionist solutions. The incongruity of a Conservative government, nominally committed to free enterprise capitalism, endorsing a coercive regional policy formed an important part of Brittan's (1971) concept of a 'great reappraisal' in Tory thinking. Subsequent writers have readily identified with Brittan's characterisation, focusing on the triumph of planning solutions associated with the Brighton Revolution.

This chapter uses recently released archival evidence to examine these claims. It argues that there was an upheaval in the *tactics* of industrial intervention. This centred on the Board of Trade's acceptance of coercion as a legitimate policy tool - an element ignored in existing accounts. A reluctance to enforce solutions on entrepreneurs was overcome by political pressure from the regions and a growing body of empirical evidence which changed the nature of location bargains. This paved the way for later policy initiatives, and replaced a tradition of negotiated compliance with interventionist methods. This meant that regional policy became less discretionary, and officials surrendered their elective powers.

If this sounds excessively Whiggish, it is because it constitutes only two thirds of the story. By itself, economic intelligence and political will would not have secured an active regional policy response. The macroeconomic environment had to

provide a pool of potentially mobile industry. The third wave of postwar motor industry expansion provided this footloose investment. It is not an overstatement to say that motor industry expansion *became* regional policy execution. From 1960-62, this sector's building programme accounted for 78% of total grants and 87% of building grants payable under the Local Employment Act (PRO 1963a).

But as well as providing a unique insight into policy administration, the motor sector also allows us to scrutinize the behaviour of industrial capital. The third wave of motor industry expansion provides a valuable opportunity to test the questions of professionalism raised by Chandler (1990), together with Reich's (1990) provocative view of state/industry relations. This chapter suggests that the location bargain discriminated against the British-owned firms. BMC in particular was disadvantaged by its federated structure and spread of production facilities. The company's negotiators needed to secure expansion for several Southern and Midland sites, and this eroded their negotiating strength. By contrast, Ford and Vauxhall could contemplate larger single site projects, and were able to exert greater pressure to secure the best Development Area sites.

This process was enhanced because the American-owned subsidiaries proved better briefed and prepared than their British counterparts. Ford and Vauxhall were willing to submit their plans earlier, and in much greater detail than either BMC or Rootes. In doing so, the foreign-owned subsidiaries drew on a wealth of American managerial experience. In turn, the indigenous firms were handicapped by uncertainty deriving from the frantic merger activity of the late 1950s. While managers became distracted by boardroom politics and the possibility of hostile take-overs, rationalisation plans were delayed and production planning suffered. As a result, UK firms were at a competitive disadvantage throughout the negotiation process.

§6.2 Reviewing Policy

In September 1957, *The Scotsman* ran an article which argued that the country was losing its place in the distribution of new industrial building.[1] Within one year of the *Scotsman's* piece, the paper was confronted by significant increases in local

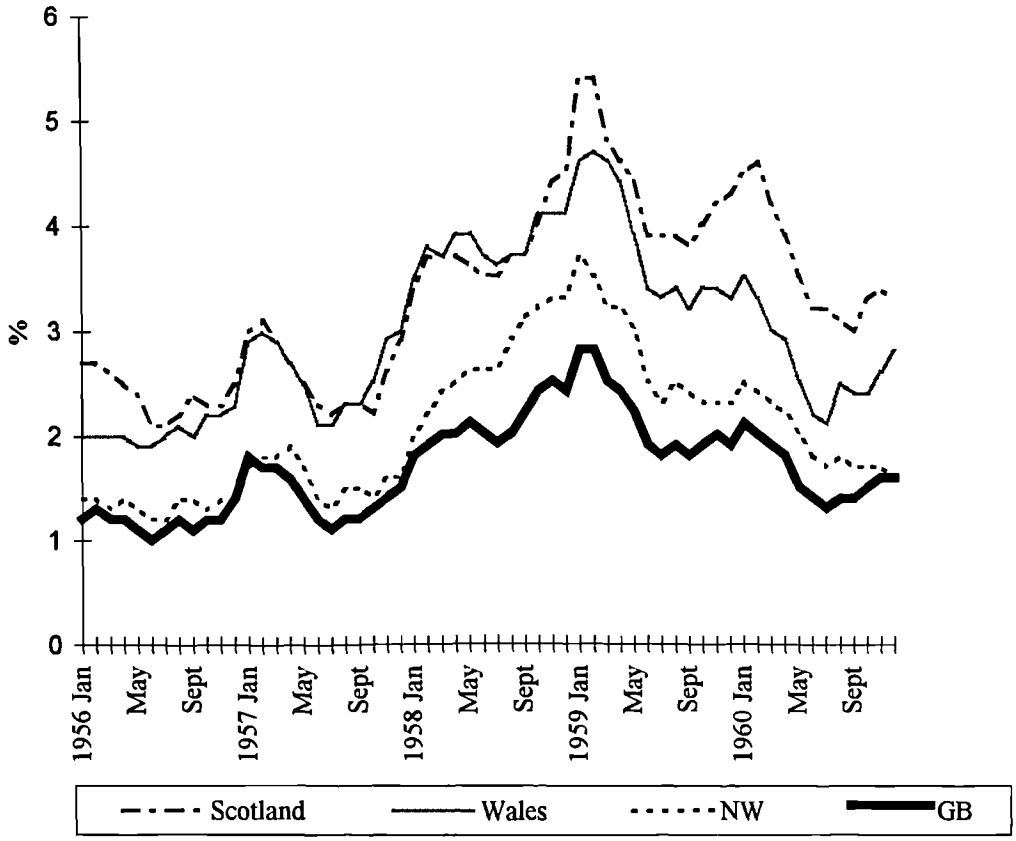
[1] *The Scotsman,* 18 Sept. 1957.

unemployment. These reflected the first significant downturn in the performance of the traditional sectors on which Scotland, Wales and the North West depended (coalmining, shipbuilding and railway equipment).

From the late 1940s to the mid 1950s, these industries had benefited from strong demand and buoyant order books. But in the five years between 1958 and 1963, they shed over a quarter of a million employees (one fifth of their total). The explanations are various, but centre on the clearance of the postwar backlog in shipbuilding, competition from alternative fuels, and deflationary pressures in the wider economy. Figure 6.1 gives an indication of the impact of these forces.

FIGURE 6.1

MONTHLY REGIONAL UNEMPLOYMENT RATES, 1956-60



Source: HMSO (1971)

Despite McCrone's arguments (1969, p. 117), the decline of the traditional industries was not 'almost totally unforeseen'. While Scott (1996, p.45) has demonstrated that officials were aware of potential problems, it is also clear that Board of Trade witnesses mounted a vigorous defence of the existing Development Areas in their evidence to the Estimates Committee in 1956.[2] But Scott's contention that officials became active regional policy advocates is flawed; it ignores the fact that the dominant ideology remained market based and anti-regulation. As political pressure for a more active regional policy increased, economic orthodoxy was only grudgingly abandoned. The Board of Trade was forced into a period of intellectual gymnastics, as officials conducted a policy review which was designed to justify a more rigorous programme. This culminated in the 1958 Distribution of Industry (Finance) Act and a much stronger use of IDCs.

From 1956-58 the government faced countervailing economic arguments. On the macroeconomic level, inflationary concerns questioned the commitment to full employment; on the microeconomic level, the dissemination of research on spatial cost patterns and industrial movement strengthened the case for a regional policy response.

The macroeconomic critique related to a continuing debate on the dangers of full employment and creeping inflation. These fears reached their peak when Thorneycroft became Chancellor in 1957. As Brittan argues (1971, p.128), 'Thorneycroft's reign is quite correctly associated with the first lurch towards deflation, in which the postwar objectives of full employment and economic expansion to which Butler and Macmillan had both been dedicated seemed for a time to be abandoned'. Although initially unwilling to sacrifice domestic demand for price stability, the chancellor later embarked on a series of deflationary policies which culminated in the famous 'September measures'.

It is somewhat ironic that inflationary fears threatened regional policy initiatives. In the 1960s and early 1970s, similar concerns led to calls for a *stronger* distribution programme. By this time, economists were examining regional Philips

[2] The same point is obvious in HMSO (1955), questions 1141-1164. For the Board's view of the proceedings PRO (1955a).

curve relationships, and had discovered that persistent disparities in unemployment could easily lead to wage inflation in high employment areas.[3] Economists suggested that institutional structures allowed these pressures to be transmitted elsewhere, and that a successful anti-inflationary policy should discriminate between regions. Thus regional policy was characterised as both 'a useful weapon in containing inflation and in obtaining a more efficient utilisation of manpower' (Hart & Mackay 1975, p. 281).

Although these ideas were not unknown to economists in the 1940s and 1950s, they were not fully articulated until empirical data became available and testable hypotheses could be developed.[4] Once again, economic intelligence lagged behind policy issues, reflecting Parson's view that economists had 'abdicated their responsibility to provide a theoretical rationale for regional policy to geographers and planners' (1986, p.131).

By contrast, the countervailing microeconomic evidence had been slowly accumulating since the commissioning of the Clay Committee in the late 1940s. After 1951, the programme resulted in a string of publications.[5] In the wider academic community, Nicholson (1956) produced an article based on the Census of Production, and many overseas based studies were completed.[6] However, the Board of Trade was principally concerned with the British mainland, and IM6 had already accumulated a wealth of practical experience. By itself, this suggested that many firms could be relocated without encountering significant long term losses.

Although officials recognised evidence of informational failure and entrepreneurial irrationality in this data, they had not yet been prepared to coerce firms into moving. But when a new political imperative was determined, the Board was forced to re-examine its position. Once officials abandoned their preconceptions, they realised that the evidence supported a much more interventionist stance.

---

[3] For a summary of these ideas, see Brown (1972, pp. 237-42).
[4] Cowling & Metcalf (1967, pp. 33-4) provide an excellent discussion of the data's limitations.
[5] Although Luttrell's work was delayed, he was nevertheless able to produce a preliminary report by 1952.
[6] E.g. Cotterill (1950), Craig (1957), Greenhut (1956), Isard and Capron (1949) Kennelly (1954, 1955a, 1955b), Lindberg (1953), Rodgers (1952) Tiebout (1957). For a review of this literature see Smith (1981, pp. 284-355).

Decisive political pressure came from a number of sources. First, there was the opposition's calls for a 'return' to industrial steering; second, there was increasing pressure from the regions for a more dirigiste policy; third, the professional planning community had found an effective voice; and finally, Harold Macmillan had succeeded to the Tory leadership.

The basis of the Labour Party's call was a return to the strategy it had pursued in 1945-51 (Parsons 1986, p.110). The appeals were led by Douglas Jay, who highlighted the rising tide of regional employment from 1956 as evidence of Conservative economic mismanagement. Unfortunately, Jays's policy prescriptions failed to ignite either public or professional interest (Self 1959). Labour's lack of new ideas effectively sidelined the issue, allowing the Conservatives to focus on the national economic position.[7] During the subsequent election campaign, the Tories developed this theme, characterising unemployment blackspots as curable 'local phenomena', and adopting the slogan 'Life's better with the Conservatives - don't let Labour ruin it'.[8] The Distribution of Industry (Finance) Act was crucial to this strategy, since it demonstrated Tory concern without detracting from national economic achievements.[9]

But while opposition demands were important for the initial policy response, in the longer term, regional pressure became vital. Lobby groups were more active

---

[7] In a debate on unemployment (Hansard, House of Commons Debates, Mar. 18, 1959, col. 437), the Minister of Labour and National service, Iain Macleod was able to produce the following quotations:

> The *Financial Times* - 'My Jay presents his proposals with a flourish. But in fact they differ only marginally from what the Government is already doing.'
> The *Economist* - 'He has to strain fairly hard to make the broad policy he has in mind look very different from the one he is attacking.'
> The *Manchester Guardian* - 'The only real difference between them is that Opposition would like the bullying and the bribing to be done more vigorously.'

[8] Butler and Rose (1960, pp. 75-97) provide an analysis of the television and radio campaign. During five television election broadcasts, both Labour and the Conservatives twice featured fears of increased local unemployment. The Conservatives described blackspots as 'pockets' which were taken seriously by government ministers, whereas Labour used local unemployment differences to highlight the government's faltering commitment to full employment. See also (Hansard, House of Commons Debates, Mar. 18, 1959, col. 437).

[9] Butler and Rose (1960, p. 138) argue that unemployment was an important issue in several places, especially Scotland. One Conservative candidate with 8% of his electorate out of work, was forced to modify the Conservative's national 'prosperity' theme.

throughout the 1950s, and the progressive decline of the Conservative's Scottish vote helped to convince politicians that a more robust approach was needed.

The Scottish lobby enjoyed natural cohesion. As well as a distinct national identity, Scottish interests had long opposed Whitehall's weak regional policy response. In 1944, Tom Johnston, the wartime Secretary of State, had persuaded local authorities to commission an industrial plan for Clydeside. When this study was published, it criticised the existing Distribution of Industry Act for being too weak. It suggested that postwar measures amounted to little more than short term reliance on shortages of building materials and factory floor space, and advocated industrial restructuring throughout the Clyde Valley.

The Cairncross Committee explored similar themes (albeit within the context of growth point strategy), and the ideas were further developed in the Toothill Report of 1961. Both of these studies were commissioned by the Scottish Council, which provided a rallying point for industry, the trade unions and local authorities.[10] Allied to a strong local press, these sectional interests made regional policy an important local concern. They were also adept in mounting single issue campaigns, as seen in the Ravenscraig decision of 1957.

As far back as 1955, the Iron and Steel board had recommended the building of a new strip mill. In 1957, the Scottish Council convened a conference to mobilise public opinion, winning support from the Scottish Trades Union Congress, the Secretary of State for Scotland, and most Scottish MPs. The new strip mill was coveted by several Development Areas, and sites in South Wales and Lincolnshire were also proposed. But by far the greatest furore was raised in Scotland, dulled only slightly by the opposition of local steel producers (Payne 1985, p.96).

The final decision reflected political rather then economic concerns, and was settled through informal negotiations with Sir Andrew McCance, chairman of the Scottish steel makers Colvilles. Sims and Wood (1984, p. 20) provide a useful summary of events:

[10] The Scottish Council (Trade and Industry) was formed from the merger of the Scottish Council on Industry and the old Scottish Development Council in June 1946. See Saville (1985, p.45).

> McCance fiercely rejected any suggestion that the Welsh company Richard, Thomas and Baldwin (RTB) might build a mill in Scotland. To obviate this competition, he proposed a split development for both regions [Wales and Scotland]. This compromise allowed Colvilles to retain their monopoly in Scotland and RTB to increase capacity. Minister of Power Lord Mills endorsed the McCance plan which the Cabinet ratified in 1958. This formula appealed to the Conservative government, not only because it focused public attention on their regional strategy prior to the General Election, but also because it shared public resources between two of the most deprived areas of the UK.

The Ravenscraig decision was taken at Cabinet level, avoiding the Board of Trade's location machinery. But the decision had important implications for IM6, since it demonstrated that a new political force was at work.

TABLE 6.1

LABOUR AND CONSERVATIVE SHARES OF THE VOTES IN SCOTLAND AND ENGLAND, GENERAL ELECTIONS 1945-87

	Conservative (%)		Labour (%)		SNP (%)
Year	England	Scotland	England	Scotland	
1945	40.2	41.1	48.5	47.6	
1950	43.8	44.8	46.2	46.2	
1951	48.8	48.6	48.8	47.9	
1955	50.4	50.1	46.8	46.7	
1959	49.9	47.2	43.6	46.7	
1964	44.1	40.6	43.5	48.7	2.4
1966	42.7	37.7	48.0	45.9	5.0
1970	48.3	38.0	43.4	44.5	11.4
Feb. 1974	40.2	32.9	37.6	36.6	21.9
Oct. 1974	38.9	24.7	40.1	36.3	30.4
1979	47.2	31.4	36.7	41.6	17.3
1983	46.0	28.4	26.9	35.1	11.8
1987	46.2	24.0	29.8	42.4	14.0

Source: Kendrick and McCrone (1989, p.50)

The decline of the Conservative's Scottish support has been well documented. In 1955, the party had secured half of Scotland's available votes, by 1987 this figure had dropped to one quarter (Table 6.1). The decline began in the mid 1950s, with the Tory's share dropping from 50.1% (1955), to 47.2% (1959). The turning point is more apparent in the 'combined gap' between Labour and Conservative voting in Scotland and England (Table 6.2). This is calculated as the Labour gap - the

Labour share in Scotland minus the Labour share in England, plus the Conservative gap - the Conservative share in England minus the Conservative share in Scotland. The trend shows a swing towards Labour, beginning in the late 1950s and interrupted only briefly by the SNP's electoral success from 1966 to October 1974.

TABLE 6.2

DIFFERENCES IN LABOUR AND CONSERVATIVE PERFORMANCES IN SCOTLAND AND ENGLAND 1945-87

	Labour advantage in Scotland	Conservative shortfall in Scotland	'Combined gap'
1945	-.0.9	-0.9	-1.8
1950	0.0	-1.0	-1.0
1951	-0.9	0.2	-0.7
1955	-0.1	0.3	0.2
1959	3.1	1.7	5.8
1964	5.2	3.5	8.7
1966	1.9	5.0	6.9
1970	1.1	10.3	11.4
Feb. 1974	-1.0	7.3	6.3
Oct. 1974	-3.8	14.2	10.4
1979	4.9	15.8	20.7
1983	8.2	17.6	25.8
1987	12.9	22.2	35.1

Source: Kendrick & McCrone (1989 p. 591).

Analyses of these figures have focused on several elements, including devolution, the religious cleavage between Protestantism and Catholicism, regional economic performance and attitudes towards nationalisation (Kendrick & McCrone 1989 pp. 594-96). The literature is complicated, and disagreements have arisen over both methodology and results. But what is clear is that the Conservative downturn coincided with increasing economic hardship. Ever since Kramer's (1971) work on American voting behaviour and Goodhart and Bhansali's (1970) seminal paper, a large literature has argued that voters reward governments for good economic news and punish them for bad.[11] This appears to be true at both national and constituency levels, and Seawright and Curtice (1995) have suggested that it was

[11] See also Sanders *et al* (1987).

the government's short-term economic record which determined the Scottish Conservative's poor showing in 1959.[12]

Whatever the real explanation, the Conservatives recognised the need for a 'regional dimension' in their policies. As a result, fear of electoral failure helped to determine the new political environment in which the Board of Trade was forced to operate.

Before considering the third source of political pressure, it is interesting to consider how the electoral arguments fit in with Gordon's (1990) regional policy critique. Gordon argued that the persistence of British regional policy reflected an attempt to 'maintain the class based dual party system of national politics by minimising the importance of other elements of political preference' (1990, p.427). According to Gordon, the Downs-Hotelling model predicts that a stable multi-party equilibrium is only possible with the emergence of multiple dimensions of political conflict. Viewed in these terms, the late 1950s sees a successful Tory response redirecting attention towards two-party issues. The Labour Party's class based campaign, famously dissected in Abrams and Rose's *Must Labour Lose* (1960), seems to reflect similar concerns.

The third component forcing administrative change was the strengthening voice of the planning community. The postwar divide between planning and distribution of industry policy has already been discussed. By the late 1950s, this schism was the subject of growing professional and academic concern. Parsons (1986, pp. 129-51) suggests that the gap was bridged during the early 1960s thanks to renewed academic interest, the development of growth point theory, and the higher profile given to macro-planning solutions. An example is provided by the Town and Country Planning Association and the Town Planning Institute, who proved to be effective lobbyists in support of integrated regional planning.[13]

Unfortunately, many of Parsons' observations post-date the Board of Trade's distribution review. But it is possible to trace the origins of these trends throughout the 1950s. For example, growth point theory had been discussed in the

[12] On the wider issue of constituency voting see Gibson (1992), Johnson & Pattie (1992), Owens & Wade (1988).

Barlow Commission, and Cairncross had resurrected the concept in 1952. The idea received academic respectability with the publication of Francois Perroux's *Pôle de croissance* in 1955, while Allen, Odber and Bowden (1957) used the technique in their studies of the North East. Similarly, Cherry has described how planners coveted a greater political role, culminating in wider participation in Parliamentary enquiries and an increasingly critical professional literature.[14] As greater recognition was paid to the profession, it became harder for the government to dismiss its criticisms. The planners' calls succeeded by adding substance and respectability to the existing pleas from hard-pressed Development Areas.

The final element underlying the Conservative's new approach was Harold Macmillan. The crucial issue here is what Brittan labelled 'the economics of Stockton on Tees' (1971, p. 124). Macmillan himself commented that 'I was constantly accused . . . by somewhat cold-blooded commentators, of being far too concerned about the personal tragedy of unemployed families. This was, it was alleged, a survival from the traumatic experience of Teesside in the years of the Great Depression' (Macmillan 1972, p. 218).

Certainly Macmillan regarded unemployment and the depressed areas as synonymous terms, but his memoirs suggest a curious modesty. Although he clearly favoured an interventionist stance, both *Pointing the Way* and *Riding the Storm* contain very few references to 'the regional problem'. The difference between Macmillan and his predecessors was a willingness to contemplate coercion. This was transmitted to the Board of Trade through the appointment of David Eccles, and the Prime Minister's personal intervention in key location decisions (i.e. Ravenscraig). Together with the other three factors, Macmillan's

---

[13] For example, in March 1960, the Town and Country Planning Association organised a national conference to discuss the 'crisis in regional planning' Parsons (1986, p. 134).

[14] Cherry (1974, p. 159), quoting from Sir Frederic Osborne in a speech to a 1951 Planning Institute Summer School:

'As officials you have muzzles on your lips and chains on your ankles. But they are not a tight fit; you can still mumble common sense and shuffle towards the light. . . If there are not padlocks on your hearts as well, it may well be that the immediate hope for a re-emphasis of the social purposes of planning lies largely with you, if you can contrive to have all the issues put clearly to the public in the publicity of your draft plans'.

interest created the political imperative necessary for a wide-ranging policy review.

The Board of Trade seems to have been under pressure to re-examine its distribution policy as early as 1956. In June of that year, a meeting between the Parliamentary Secretary and two senior IM6 officials, Levine and Fish, expanded its brief on financial inducements to consider the wider implications of stiffening IDC policy (PRO 1956). The Parliamentary Secretary argued that it might 'now be the time' for more positive industrial steering, and recommended a more rigorous sifting of IDCs at Millbank. Officials responded with some very well rehearsed arguments, including the possibility of uneconomic production, the threat to exports, and possible loss of new investment projects. Nevertheless, the Parliamentary Secretary pressed his case, and ordered an investigation, the Andrew Report, into policy alternatives and current administrative performance.

This meeting predates both the Macmillan premiership and the appointment of Eccles to the Board of Trade. But the official files omit any reference to the study until April 1957. In a discussion paper which closely mirrored the Andrew brief, a research officer (Hallam) called for 'a toughening out of policy'. Amongst his proposals were:

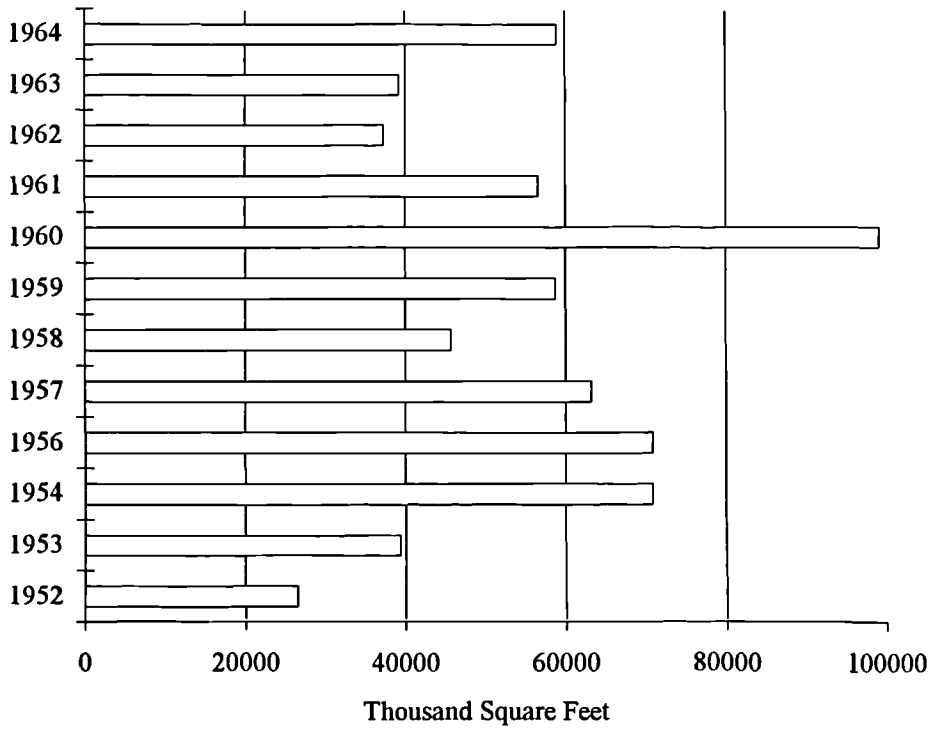
- more scrutiny of applications
- an acceptance of 'reasonable delay' in cases where there is the opportunity to influence location
- an undertaking to make it clear that the Board will refuse certificates- 'if this were known the firms might take us more seriously'.
- changing the burden of proof in cases where firms claim they are tied to an area (firms should have to demonstrate that ties exist, rather then the Board being forced to show that they do not).
- a recognition that 'lock stock and barrel' moves are the best opportunities to get employment into the regions
- official acceptance that 'movement from a more congested part of a region to less congested part is still increasing congestion' (PRO 1957b).

This approach was justified in both political and economic terms. The paper noted that, 'On the one hand, there is the interest recently shown by the Opposition in the House of Commons and interest generally shown in the House of Lords: on the other hand we may be beginning another expansionist period in factory

building' (PRO 1957b). In the short term, this view of factory development proved inaccurate. It was not until 1959/60 that new building (proxied through IDC approvals) exceeded the levels of 1956 (Figure 6.2). But the notion of a new political imperative was absolutely correct.

FIGURE 6.2

FACTORY BUILDING APPROVALS, 1952-64



Source: Board of Trade (1955), IDC statistics supplied by Brian Ashcroft.

By June of 1958, there is evidence that the Board of Trade was ready to capitulate to this political pressure and contemplate a much tougher regime. The consequent review of policy illustrated that very little had changed since the Attlee period:

> Our present policy is to grant permission to expand where the project could not reasonably be carried out elsewhere. There is no scientific test, and at present we use the 'persuasion principle' in any situation of promise. In the last resort we have not been prepared to refuse (except perhaps where a major expansion is involved) where the firm is adamant that it could not move (PRO 1957b).

The document continued, '. . . The light rein has become known, and the policy of persuasion and bluff has become less effective' (PRO 1958). However, the paper was ambivalent towards policy responses. It noted that the amount of steerable projects was quite low, and that officials were far from confident in their ability to select vulnerable firms. The solution was to apply a universal control, where discrimination was not permitted unless a point of policy was involved. The measures would apply to both congested and neutral areas, and would allow very little latitude in individual case management. In effect, these proposals removed civil servants from the decision-making loop. This reflected legal advice, and a perceived institutional need to *force* lower level bureaucrats to challenge entrepreneurial freedoms.

The paper concluded in a cautionary manner. Although it described strict policy as a 'gamble', for the first time it hinted at broader conceptions of efficiency.

> The conclusion is that the inauguration of a more rigorous policy would have more far reaching consequences and would be a gamble. One would have to announce it to assuage the first victims, and there would be great interest in getting it reversed in all cases. The size of the gamble is measured in very rough and ready terms by the value to the economy of the approvals which we are present giving in the congested areas. A restrictive policy would tend to bear particularly harshly on progressive and enterprising firms, as in general, these are the ones which are expanding. However, the measure of the cost is also, in obverse, the measure of the opportunity (PRO 1958).

These quotations demonstrate some fundamental truths about the Board's changing approach. Officials recognised that there were difficult administrative problems associated with controls. Nevertheless, they were willing to offer practical solutions. Political circumstances were forcing officials to re-examine their free market ideals. They had already accepted that informational failures dominated location decisions, the next step was to accept coercion as a legitimate device in securing the most commercially efficient distribution of industry. This idea would take many years to germinate, but the political imperatives of the 1950s made this process inevitable. Hallam summarised the changing mood:

> The Midlands is itself one of the greatest industrial concentrations in the world, and its expansion from 1953-56 must have been good for the UK economy, but if the area is to continue to make a contribution, the expansion must at least marginally be halted. We have hitherto overlooked the fact that

> limiting congestion might well be a creditable aim in itself. The question is do we want a control, do we want to make the operation of Section 14(4) of the Town and Country Planning Act a purposeful instrument of policy? At the moment we are not operating a control in the Midlands. We have powers and we are not using them, but reading the debate in the House of Lords on March 27, it seems that the public expect us to (PRO 1957b).

§6.3 Applying Policy

The new regional policy approach was embodied in changing administrative arrangements and the passing of the 1958 Distribution of Industry (Industrial Finance) Act. The Act was reactive rather than proactive, extending financial assistance to pockets of high unemployment and increasing the scope of existing payments.

At this time, the Board's attitude towards financial assistance was transformed. As we have seen, the 'efficiency first' criteria had previously denied assistance to many firms considering relocation. The Board had also displayed an almost pathological aversion to face to face negotiations. This was because officials were keen to avoid case conferences where businesses could prolong negotiations and demand unfair concessions. According to the Parliamentary Secretary, the Pressed Steel case of 1956 had been '. . .a good example of the difficulties under which the Government's negotiations were conducted. The firm had asked what assistance could be offered and had then sought to negotiate for more assistance starting from that basis; it seemed this process would go on and on' (PRO 1956).

By 1959, Macmillan's political commitment and the results of the Andrew Report had begun to change official perceptions. In January, IM6 launched a campaign to publicise DATAC's facilities; in July, the Chancellor conceded that greater incentives could be made available in the Development Areas (PRO 1959a). The results were palpable. From July 23rd, 1958, to February 3rd, 1960, DATAC received 1,350 preliminary enquiries, these produced 527 'eligible applications', of which 165 were recommended, 238 were rejected, and 124 remained under review (Table 6.3). A total of £9,102,595 was allocated to these schemes, providing support for approximately 13,500 additional jobs (HMSO 1962).

TABLE 6.3

APPLICATIONS FOR FINANCIAL ASSISTANCE UNDER THE DISTRIBUTION OF INDUSTRY (INDUSTRIAL FINANCE) ACT

	England	Wales	Scotland	Total
Total number received	279	66	182	527
Recommended by DATAC	94	16	55	165
Rejected by DATAC	147	29	62	238
Still under consideration	38	21	65	124

Source: PRO (1962d)

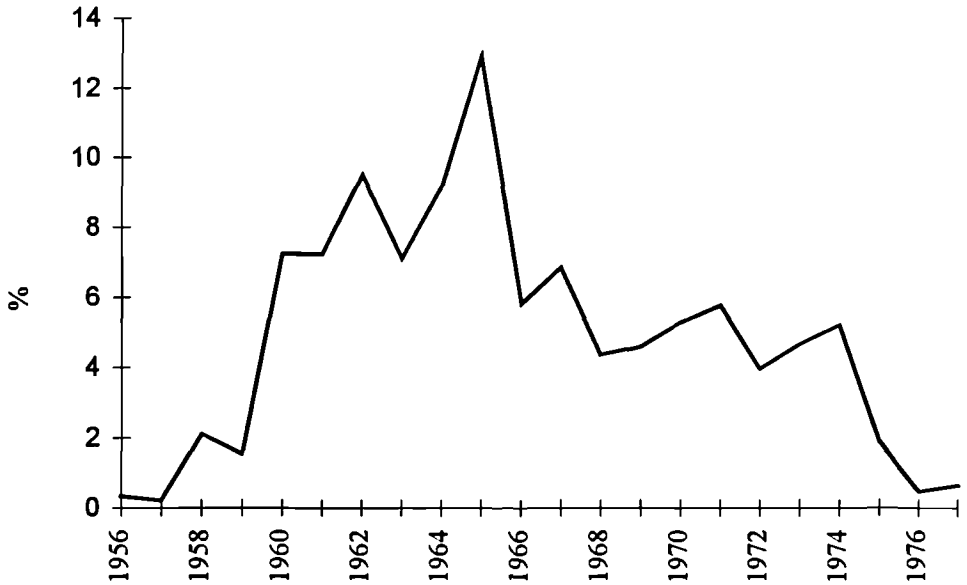
Although similar approval rates were recorded during the 1940s, there was still a massive increase in scale. Under Labour there had been an average turnover of 30 applications per year; in 1959/60, the number of bids had increased seventeen fold. The funding was also much greater, attracting £3.1 million in 1959/60, compared to an annual average of £580,000 between 1946/7 and 1950/51. Total regional policy spending remained below Labour's record only because of the factory building programme, which had fallen steadily from its peak of £12.5 million in 1947-8 to £1.5 million in 1958/9 (HMSO 1973a, p. 457).

However, the important changes in regional policy were reserved for IDCs. In Randall's words (1973, p. 30), the government became guilty of oversteer, '. . . an excessive swing of the pendulum that in some cases frustrated sensible industrial developments in the Midlands and South East (often outside the big cities) which could not have taken place in the Development Areas'.

The statistics on IDC refusals support this interpretation. The year 1959 can be identified as a turning point, separating periods of active and passive administration (Figure 6.3). This is also apparent from Figure 6.4 which shows how restrictions began to bite on a much lower level in 1959/60.

FIGURE 6.3

PERCENTAGE OF BUILDING PROJECTS REFUSED AN IDC IN THE SOUTH EAST REGION, 1956-77



Source: IDC statistics supplied by Brian Ashcroft

FIGURE 6.4

PROFILE OF AVERAGE REFUSED PROJECT, 1956-76

Source: IDC statistics supplied by Brian Ashcroft

This harsher approach occasioned complaints from both ministers and business leaders. At a regional controllers' conference in March 1959, the Parliamentary Secretary thought it necessary to remind officials to respect efficiency defences. The problem was that IM6 officials and their regional staff had adopted a very rigid administrative code. At this stage, distribution of industry policy was politically driven, and most bureaucrats had not yet fully abandoned their free market sympathies. Under acute ministerial pressure, top officials developed a framework which guaranteed results. While policy studies continued in the background, civil servants had been forced to surrender their elective powers.

It is here that the motor industry becomes especially relevant. Its third wave of postwar expansion coincided with the change in location policy. Between 1959 and 1960, it became the focus of the entire distribution programme. Although the negotiations were completed at ministerial level, the associated empirical studies, regional lobbying and theoretical developments forced the Board of Trade to finally abandon its laissez faire approach.

At the time, all the major British based motor manufacturers were contemplating expansion. Their strategies were mixed, but, in general, they derived from the same fordist motives which had driven previous waves of growth. From 1958 to 1960, seven large proposals were submitted. Each bid had its own logic, but all reflected a renewed confidence in the motor industry's prospects.[15]

The earliest approach was made by Chrylser. For some time, the American company had been contemplating further European expansion. Unlike Ford and GM, Chrysler had traditionally shunned overseas based manufacturing. The reasons were complex, but related to operating scale, internal rivalries and design preferences.[16] In 1958 there was a change of policy. After taking advice from the McKinsey Company, Chrysler developed an Anglo-French investment strategy (Moritz & Seaman 1981, p. 84). The company acquired a 25% stake in Simca, and targeted Rolls Royce, Standard and Leyland for take-over. Chrysler was

[15] Brief details of these schemes may be found in Goodwin (1962).
[16] Moritz & Seaman (1981) Ch 3. provides a useful summary of these issues.

convinced of both the European sales potential, and the importance of the Commonwealth market.

Unfortunately, the company's British approaches were rebuffed. As a consequence, the board was forced to adopt a fall-back position. Chrysler proposed a UK operation catering exclusively for the export market (PRO 1959g). The scheme was in two stages, with a pilot plant operating from existing premises in London, to be superseded by a large scale assembly shop. No location had been determined for this larger plant.

Ford's scheme was the next to be submitted (PRO 1960g). The company wanted to expand its production from 400,000 to 700,000 units per year. Ford preferred to stay in the Dagenham area, concentrating production around Basildon New Town, while freeing space at its main plant. Their investment was costed at approximately £15 million, and, like Chrysler, was aimed squarely at the Commonwealth and European markets. Vauxhall's scheme shadowed Ford's proposals, with a planned increase in passenger vehicle production and an expanded model range.[17] Again substantial new installations were needed, and the company favoured sites close to their existing facilities in Luton.

BMC's proposals were the most ambitious of the seven. The Board intended to increase production from 750,000 to 1,000,000 units a year (Vauxhall Motors Ltd 1973, p.463). BMC planned to export at least half of these vehicles, valuing the current account benefit at £200 million per year. The programme involved considerable reorganisation, but it was not a unitary development. There were six separate elements, ranging from tractor production to washing machine plants. This was a legacy of the company's federated structure, and it succeeded in making BMC particularly vulnerable to distribution policy. Whereas Ford and Vauxhall could concentrate on single issues, the British firm needed to secure agreement on a variety of proposals. This gave Ministers more scope to influence the company's location.

[17] Very few details are provided of Vauxhall's original proposal in the official records, although it is clear from later submissions to the Expenditure Committee that their preferred site was in Luton (Vauxhall Motors Ltd, 1973, p.463).

Unlike the other programmes, Standard Triumph's plans were largely defensive. Standard's chairman, Alick Dick, had long recognised that the company was too small to survive in a competitive market (Langworth & Robson 1979, p.188). After merger negotiations with Rootes (1957), Rover (1954,1958) and Massey Ferguson (1959) had failed, Dick embarked on an ambitious plan to secure long term economies of scale (Whisler 1995, p23). He planned a new model range, spearheaded by volume production of the Triumph Herald. Parallel with this plan, the chairman aimed to secure far greater control over component supply. As the Group Development Plan explained, 'It is essential that if the Standard Triumph Group is to maintain its position as a major motor manufacturer, reduce its costs . . . and increase its profit margins, it should control a far higher proportion of its sources of component supply' (MRC 1959a).

Standard's first steps were to acquire Mulliners Limited and Fisher & Ludlow in Coventry. This increased body making capacity to 185,000, still well below the corporate target of 300,000 per year.[18] So in 1959, Standard also acquired Halls Engineering of Liverpool. This went some way to completing Dick's plan, but it was clear that a new site would eventually be needed. The company wanted to use premises in Coventry, but soon encountered the Government's new IDC policy.

The Rootes proposals have been the most documented of the seven.[19] From 1955, a team of company designers had been exploring the option of adding a small car to the Rootes line-up. This was a clear departure from the existing strategy, which had specialised in producing dozens of medium sized, family vehicles (Hillmans, Singers and Sunbeams). Nevertheless, the proposals gained the personal backing of the Rootes brothers, and became the centre of the firm's long term planning. Geoffrey Rootes explained why:

> Rootes decision to expand in the late 1950s was because of the growing importance of the small car market in the UK . . . and this was a sector in which we were not represented. We had for many years been working on the design of a vehicle to fill this gap and the Hillman Imp was in advanced state of design and prototype testing. It was for this reason that we wished to

[18] Body making capacity at this time was: Triumph Herald 120,000, Vanguard 25,000, Triumph Sports 28,000, Atlas Commercial 12,000.
[19] Sims and Wood (1984), Henshaw & Henshaw (1988); Young and Hood (1977), Waymark (1983).

> expand our manufacturing capacity which was necessary to fill the gap in our model range.[20]

The Imp was a revolutionary vehicle, and its production required new capacity.[21] Rootes earmarked land at Dunstable and Coventry for expansion, and soon began designing modern facilities (Young & Hood 1977, p. 75). Sims and Wood (1984, p.28) suggest that Rootes delayed announcing their project 'in the hope that the larger firms would take up regional locations.' Certainly, Rootes submitted their plans later than their competitors, but this was part of an established pattern. It reflected a culture where the Rootes brothers had traditionally dictated their terms to government. They had grown used to presenting officials with a *fait accompli*, locking civil servants out of the planning process, and using patriotic appeals to secure results. This strategy had worked before 1959, but in 1960 it would prove dangerous.

Pressed Steel's expansion proposals derived from the other motor industry projects. Pressed Steel was a body builder which maintained a number of other manufacturing interests. In 1960, the company was seeking permission to expand in three, possibly four locations. The company already operated plants in Swindon, Oxford, Theale and Linwood. Linwood had hitherto been the only long term motoring regional policy success, although Pressed Steel had used the plant to manufacture rolling stock rather than car bodies (Sims & Wood 1984, pp 16-17).

Pressed Steel had recently won a contract to supply car bodies to BMC at Cowley, and requested an expansion of 820,000 square feet at Swindon, employing an additional 1,400 men. The firm also proposed a new tool making plant in the North East employing 1,000, as well as a further expansion of their refrigerator plant at Swansea (PRO 1960k). In addition, the company wanted to expand its Linwood factory by 700,000 square feet, should Rootes decide to expand in Scotland.[22] Together this package represented a potential employment package of nearly 10,000, with more than 60% of the jobs in high unemployment areas.

---

[20] Quoted by Allan (1991, p.3).
[21] Henshaw & Henshaw (1988) provide a detailed outline of the car's design and marketing.
[22] Pressed Steel estimated additional employment Linwood of approximately 5,000 (Sims & Wood 1984, pp. 16-17)

The final proposals were submitted by Rover. At that time, the company was one of the smaller British manufacturers, employing about 10,000 people with an annual output of 50,000 vehicles (PRO, 1960j). The company relied on Land Rover sales, constituting over two thirds of its output in 1959/60 (Austin Rover 1985). Rover planned to expand production to between 80,000 and 100,000 vehicles, with the new P6 2000 spearheading its sales campaign (Robson 1984, pp. 144-47). To facilitate this, the board applied for 1 million square feet of new buildings at its Solihull factory, estimating that 2,000 extra jobs would be created.

All the schemes shared certain characteristics. They revealed a preference for *in situ* expansion, they reflected optimistic market forecasts, and they illustrated the search for greater economies of scale. However, the subsequent government negotiations underlined crucial differences in managerial behaviour. These negotiations were divided into three phases; the first centring on attempts to secure approval, the second focusing on alternative locations, with the third round relating to compensation deals. It is worth examining each stage.

Within weeks of the 1959 election, Macmillan had ordered the formation of a new Distribution of Industry Committee. The membership consisted of the President of the Board of Trade (Reginald Maudling), his department's Parliamentary Secretary, the Secretary of State for Scotland, the Minister of Housing, the Paymaster General, the Minister of Labour, and the Treasury's Economic Secretary. The committee's terms of reference were straightforward, 'To consider problems arising from distribution of industry policy and local unemployment'. In practice this meant that it would vet the motor industry's plans, and oversee the introduction of Macmillan's new regional policy.

Initial committee meetings concentrated on establishing guidelines for motor industry negotiations. As President of the Board of Trade, Maudling enjoyed a much stronger mandate than his predecessors. His views on distribution policy were unrecognisable from those of Thorneycroft's. Using the analogy of a small boat, he explained how . . .

> . . . all those in her may rationally calculate that the seats in the stern are most attractive, but if they all rush simultaneously to get there, the result is disaster. In just the same way the rush of industry to the Midlands and the

> South East was threatening the stability of our economy. . . Either we had to run the economy too hard to make sure enough jobs were created in the North and Scotland, or we had to restrain growth in the South and Midlands at the cost of persistent unemployment and wasted resources in those other areas. The simple fact is that people are not movable like pieces on an economist's chess-board. Heaven forbid that they should ever become so (Maudling 1978, p.81).

In general, the Distribution of Industry Committee endorsed these views. But the body also recognised a need to safeguard commercial efficiency. In a meeting on 17th December 1959, a broad policy was established. First, the committee took a firm stand against the expansion of existing installations in the South and Midlands. Second, it recognised that 'in an integrated industry such as motor manufacturing, it would be unrealistic to forbid altogether expansions in existing installations.' It concluded, 'On these grounds it might be more reasonable to try to use approval of a modest expansion of existing installations as a means of persuading the industry to undertake major new developments elsewhere' (PRO 1959h). This approach was much more in keeping with the French system of *Agrément.*

By November 1959, Maudling had already attended preliminary meetings with several motor makers. He had told both Chrysler and Ford that expansion in the South was unacceptable. In both cases he indicated that Development Areas should receive the largest share of new investment. It was this policy which the Distribution of Industry Committee ratified. The pattern was repeated with all the major manufacturers, who were told that their existing plans were inconsistent with 'the proper distribution of industry'.[23]

It is difficult to say whether the Conservatives would have been willing to forego investment if the motor makers had refused to relocate. The Board of Trade was certainly aware of the risks, having studied the possibility during its 1958 review. But the motor firms were desperate to expand. Given the various market forecasts and individual corporate priorities, the balance of negotiating power clearly rested

[23] No refusal certificates were issued, instead Maudling informed the chairmen personally.

with the state. Any remaining qualms about imposing 'uneconomic' locations were allayed because Maudling could offer an improved compensation package.[24]

In their 1959 manifesto, the Conservatives had promised that 'Our first major Bill in the next Parliament will be one to remodel and strengthen our powers for coping with local unemployment' (Butler & Rose 1960, appendix). The subsequent Local Employment Act has been variously been described as a 'tidying up' act, a 'first aid' package, and 'a natural dividing line in the development of postwar regional policy'.[25] Its immediate aim was to end some of the confusion surrounding current legislation. The Act retained the main features of existing loans and grants, and extended their eligibility. But the significant changes were administrative.

In the 1950s, DATAC's activities had been limited because a) projects had to demonstrate that they were financially sound, b) firms had to show that they could not raise funds from other sources, and c) Treasury officials retained a veto. The 1960 act removed these constraints. Conditions (a) and (b) were replaced by a general statement requiring 'a reasonable chance of success'. At the same time the Treasury lost its supervisory role when DATAC's functions were transferred to a Board of Trade Advisory Committee (BOTAC). For Sir Frank Lee, this was a welcome move. In a memorandum submitted to the Plowden Committee, Lee had railled against the Treasury's stifling influence (PRO 1960m). Lee was a conservative, who naturally disliked the idea of location planning. Nevertheless, his department was committed to tackling unemployment blackspots. While there *was* common intellectual ground between departments, the Board's regional policy portfolio and the Treasury's public expenditure brief generated antagonism. This

[24] A briefing paper for the Secretary of State for Scotland examined these issues: 'It seems inconceivable that, if BMC or any other car maker stick to their guns and refuse to carry out their major expansions anywhere but in the place of their choice, any government would in the last resort refuse them an IDC there. To do so would mean forbidding the expansion of an industry that has probably done more than any other to keep the country afloat during the last recession and that is one of the principal export earners. Moreover, in the case of Ford and Vauxhall, the big stick might have the effect of driving expansion out of the UK into our common market competition. The refusal of an IDC should therefore be backed up by substantial positive inducements' (SRO 1959d).

[25] See McCallum (1979, p11), Parsons (1986, p. 111) and Randall (1973, pp. 30-32).

only surfaced in the late 1950s, when political pressure forced a policy response from IM6.[26]

The Local Employment Act enabled the stick and the carrot to be combined for the first time since 1945. But whereas Labour had concentrated on providing factory space, the Conservatives targeted incentives towards socially desirable projects. This provided a powerful bargaining tool, 'sweetening the pill' for prospective migrants. As an internal document from Standard motors explained:

> It would not be in the interests of the company or the Group to establish a major unit over 100 miles away from its main production centre unless the financial assistance forthcoming from the Government considerably offsets the cost of establishing new buildings, plant and equipment in Development Areas far removed from the industry's traditional centre of manufacture and supply (MRC 1959a).

Once the government's refusal had been communicated to the firms, the bargaining process entered its second phase. This involved the industrialists' own site surveys, together with active lobbying by regional interests.

The Scottish Office and Scottish Council had been targeting motor firms ever since the Clyde Valley Industrial Plan had been published in the 1940s. In 1950, Lord Bilsland had visited Patrick Hennessy to discuss investing in Scotland (SRO 1959e). The bid failed. In December 1959, Scottish Labour MPs met the STUC to organise a new campaign to attract motor manufacturers (Sims & Woods 1984, pp. 21-24). Although Sir Robert Maclean, Chairman of Scottish Industrial Estates Limited, reported that all the major companies had recently visited the country, he could find little cause for optimism. The perception grew that Scotland would lose out to Merseyside and South Wales because of personal prejudices and undefined cost penalties.

Chrysler was the first company to consider Development Area locations. In March, Sir Robert Maclean had visited the firm's Detroit headquarters to promote Scottish sites (SRO 1959a). This was before the Board of Trade was even aware

[26] The ambivalent attitude of Board officials and the key role of political pressure is illustrated in the following quotation '. . . we seem to be committed by what Ministers have said and done and especially by the moves initiated by Ministers themselves around about the end of October and the beginning of November. If you should look for a nigger in the woodpile I think it was the Scottish election result' (PRO 1960b).

of the company's interest. In April 1959, Chrysler's representatives were given a tour of Scottish locations which left officials bullish. As one noted, 'If the project comes off it will be of immense importance to the industrial future of the area. . . With the subsidiary activity and employment a project of this size would generate, we should have a very big change in the employment and industrial position in the Lowlands. Conversely, if we do not land the project, the frustration and bitterness caused will be intense' (PRO 1959b).

By May, the Board of Trade's headquarters had become involved. This coincided with the completion of Chrysler's full-scale study which forecast 'in-built cost disadvantages' for Scottish locations (PRO 1959c). The study identified several alternative sites, including Wigan and Liverpool. From the Scottish Office, it seemed that Millbank had poisoned the deal. These feelings were fortified when Chrysler's officials reluctantly returned to Scotland for a final inspection. An accompanying civil servant noted:

> The day started off with the representatives making it quite clear that the visit to Scotland was a waste of time . . Mr Clem in particular made no attempt to disguise that this was so and he succeeded in maintaining that attitude throughout the day. He could find nothing favourable in Scotland in any shape or form, but it emerged that he is the most fanatical of fanatical soccer followers and that a life which does not permit visits to Craven Cottage and Stanford Bridge on alternative Saturdays is just not to be contemplated (PRO 1959d).

The truth was rather different. As the Scottish Office suspected, in a direct comparison between Merseyside and the Lowlands, the English site 'promised' lower costs and greater proximity to suppliers. If Renfrewshire could boast Ravenscraig, Merseyside had Summers (sheet steel), Pilkingtons (glass) and Dunlop (tyres). In July of 1959, Mackay began lobbying Eccles for more generous incentives to counter these disadvantages. The discussion mirrored a wider debate between the Board of Trade and Scottish Office over the contents of the 1960 Local Employment Act. This discussion bore fruit when Maudling agreed to operate the Bill with a Scottish bias 'when the right kind of project turns up'. A Scottish Office minute interpreted this as straightforward commitment: 'He clearly meant that the inducements will be screwed up to the point of bribes if there was a completely worthwhile reason for doing so' (SRO 1959b).

As well as demonstrating the need for a flexible incentive package, the Chrysler case once again proved the need for effective economic intelligence to counter industrialists' claims. The Clay Committee's findings were useful, but industry-specific figures were required. Consequently, the Scottish Council commissioned a report into prospective sites, component suppliers, transport facilities and cost patterns. Using a variety of assumptions, the study identified potential suppliers for 80% of the gross component weight. Freight costs were calculated for 100 vehicles, and set against the potential savings accruing from Renfrewshire's proximity to export ports. The exercise computed an extra cost per one hundred vehicles of £8 7/-, and an extra cost per vehicle of 1/- 8d (Table 6.4).

TABLE 6.4

SCOTTISH COUNCIL TRANSPORT COST ESTIMATES

Assumptions:
The following balance for 100 vehicles assumes that 50 vehicles would go for export and 50 to the home market

UK Transport:	£:s:d.
To distribute within the UK (50 units)	97: 10: 0
To transport of supplies (100 units)	60: 0: 0
To extra stock, maintenance and capital charges (100 units)	13: 7: 0
Total	170: 17: 0
From lower transport to ports (50 units)	(162: 10: 0)
Balance against Scottish location	8: 7:0
Extra cost per vehicle in Scotland	0: 1: 8

Source: SRO (1959g)

As we shall see, many of the assumptions were hopelessly optimistic, but they did provide the Scottish lobby with verifiable data. They also allowed government negotiators to raise the possibility of countervailing labour cost savings. This issue dominated talks with Pressed Steel, although pay was rarely mentioned during

meetings with the other companies. One explanation is the lack of published information on regional earnings. Apart from the attempts by Deane (1953) to construct regional indices of earnings for the late 1940s and an article by Hill and Knowles in 1956, no systematic data was available until 1962. Later estimates by Hart and Mackay (1975) confirmed a stable regional earnings hierarchy, with Scottish and Merseyside levels converging, but remaining well below the national average (Table 6.5).

TABLE 6.5

ENGINEERING WEEKLY EARNINGS (Shillings) 1948-60

	1948	1951	1955	1960
Coventry	184	233	323	447
London Area	151	183	262	336
Liverpool	143	175	251	305
Scottish	138	139	243	302
Weighted Mean	148	183	257	327

Notes:

Based on a sample of 28 Employers Engineering Federation local associations.

Source: Hart & Mackay (1975) Table A1

Another potential explanation for pay's low priority was a stress on labour 'quality'. Lord Stokes' view that the 'inability to get labour into the Midlands was a myth' was echoed by all the manufacturers (Stokes 1971, p 200). Throughout the postwar period, the Midlands remained a popular destination for migrants. For example, a 1963 Department of Environment survey estimated that inward migration accounted for 44.5% of population growth in Coventry between 1951 and 1961.[27] Turner's work (1963, pp. 122-35) identified higher wages as the principal attraction, although executives admitted that many newcomers were ill-suited for factory work. The thirst for workers led to an important labour relations problem. As Eric Wigham of the Engineering Employers Federation explained:

> Motor manufacturers tended to be freebooters. Their attitude was that if anyone was to go short of labour it would not be them, and they would

[27] A Ministry of Labour study (Harris & Clausen 1967, p. 27) confirmed that the South East and Midlands were the second and third most favoured destinations amongst migrants.

> often give way to a sudden demand from a group of workers rather than risk loss of production.[28]

In this context, low wages were less important than maintaining good industrial relations. Above all, motor bosses were keen to secure suitably qualified labour while avoiding possible disruption. If *in situ* expansion was ruled out, Development Area sites offered a chance to create new workplace environments. Scotland, Merseyside, and the North East all stressed the adaptability of their workforces, while seeking to downplay evidence of labour militancy.[29] In the first years of operation, this 'flexibility' issue would dominate management thinking.

Throughout 1959, all the Development Areas actively lobbied for motor industry investment. The shepherding of top-level executives from site to site became a familiar ritual for Board of Trade officials. Chrysler's experiences illustrated the issues which would dominate these discussions. All the firms were concerned about transport costs, labour availability and communications. In most cases, this lead to a direct preference for Merseyside. The Manchester-Liverpool corridor offered proximity to the Midlands, development potential and good rail and road links. But even here, the issue of compensation was critical. All the motor firms sought to secure the greatest contribution possible under the Local Unemployment Act. These settlements would go a long way towards meeting each firm's location objections.

Not surprisingly, Chrysler was the first case to be resolved. Once Scotland had been eliminated as a location, the Americans pressed for approval in London and Wigan. In a letter to David Eccles, John Mackay argued for a transport subsidy to push Chrysler northwards (PRO 1959e). But by late 1959, the firm was already questioning its European strategy. On the one hand, an American steel strike was threatening US production, on the other, there was great uncertainty about Britain's future in Europe (PRO 1959f). Chrysler's poor financial results compounded these issues, and forced the project's abandonment.[30] Although

---

[28] Quoted by Sims & Wood (1984, p. 24).

[29] This proved particularly difficult in Scotland where the *Daily Record* and *Scottish Daily Express* ran a series of articles on 'strike happy' Clydeside workers. See Sims & Wood (1984, p.23).

[30] Chrysler recorded losses of $73m in 1958-9 and $10m in 1959/60 (White 1971, p.16).

Chrysler returned to the UK in 1965, this was through a predatory take-over, rather than direct manufacturing investment.

Ford's negotiations proved much more satisfactory. The Distribution of Industry Committee ruling meant that Maudling could allow expansion in the South East only if the majority of new jobs went to Development Areas. Ford's revised scheme called for limited development at Dagenham, the transfer of its tractor plant to Basildon, and an entirely new Development Area factory. According to Ford's 1973 Expenditure Committee evidence, the company examined three sites for the new plant: Northumberland, Teeside and Merseyside (Ford Motor Co. Ltd, 1973, p.78). However, officials privately recognised that Ford would 'not even contemplate' going to the North East or Scotland. Ford's rejection of the Clyde Valley had a sound empirical basis, since the company had recently completed a relevant cost study. But the rejection of the North East is more perplexing. All the motor firms rejected the region as unsuitable with little or no explanation. The area offered the same facilities as Merseyside, South Wales and Scotland, and proved very attractive to foreign investors in the 1980s. In 1960 however, geography seemed to handicap its appeal.

Ford's plans were announced on 21 January 1960. Merseyside's local press was euphoric, with the *Liverpool Echo and Evening Express* speculating on the likely benefits: 'The fact of the matter is that Ford is not so much of a factory as an industrial estate in itself. The arrival of a bustling, pushful, look-ahead car industry on the city's outskirts will be one of the biggest things to affect the lives of the citizens for many a year'.[31] As part of the settlement, Ford sought a substantial aid package, calling for all 'the appropriate benefits under the Local Employment Bill'.[32] The aid details will be examined shortly, but of far greater significance for the other firms was Hennessy's attempts to block further Merseyside developments. This led to a very public row between Ford and the Board of Trade.

[31] The *Liverpool Echo*, 9 Feb. 60.
[32] A phrase repeated by Maudling during the Distribution of Industry Committee's discussion of the Ford expansion (PRO 1960h).

The row was precipitated when both Vauxhall and Standard identified Liverpool as their preferred sites. According to Standard, a Merseyside plant would secure reasonable returns (MRC 1959b). The plan called for an extension of the Halls plant, together with additional pressing, assembly and paint and trim capacity at an adjacent site. This would involve an extra 4,500 workers, with total expenditure of £7.1 million over seven years. Future expansion was conditional on finance, but as company documents noted ' . . . if it is possible to obtain sufficient government assistance . . . the Group is prepared to direct all future development into this area. The scheme presented below could therefore be regarded as a first step towards the establishing of a major manufacturing unit in the Liverpool area' (MRC 1959a).

Standard's announcement was made on 12th February; Vauxhall's statement followed two weeks later. After Maudling had refused IDCs for Luton and Dunstable, the Bedfordshire company had been pushed towards either Scotland or the North East. Under the auspices of General Motors, Vauxhall conducted detailed surveys, but the firm had decided that 'they could not go further away from Luton than Merseyside' (PRO 1960l).

It is not surprising that Ford and Vauxhall favoured Merseyside locations. Both companies drew on significant American expertise in location planning. In the United States, the industry had undergone several expansions where branch plant location was critical to business strategy.[33] James Rubenstein describes how postwar planners , '. . . embraced neo-classical location theory to determine where new assembly plants should be built. GM officials even appeared before a US Senate investigating committee in 1955 armed with maps depicting the market areas surrounding each of the company's branch assembly plants and financial data justifying why the locational model was optimal' (Rubenstein 1992, pp. 87-8).

When Standard's and Vauxhall's plans were announced, Ford reacted furiously, 'suspending' its Halewood plans and launching a strident press campaign. Patrick Hennessy told the *Daily Telegraph* that he had been assured that 'Merseyside

[33] Between 1945 and 1960, General Motors opened four new US plants (Kansas, Delaware, Atlanta Doraville, Arlington), Ford built nine, (Atlanta, New York, San Fransisco, New Jersey, Los Angeles, St Louis, Detroit, Lorain), and Chrysler finished two (Delaware, St Louis).

would not be allowed to become another crowded Coventry', and that he now felt 'misled'.[34] It was left to the *Financial Times* to provide a more balanced assessment. The paper recognised that although Vauxhall would be a strong competitor for labour and materials, '. . .The motor industry is anyway keenly competitive, and it would be in Ford's interests to force Vauxhall into a less favourable site. But when all is said and done, Ford will most likely move. Dagenham is at full capacity, and Anglia delivery dates are 12 months.'[35] This analysis proved spot-on.

Although the Standard and Vauxhall plans caused consternation in England, in Scotland the response was vitriolic. The Scottish Office had written off their chances of attracting Ford in mid-1959, but Ministers had highlighted Vauxhall as one of their best prospects. When it became clear that GM favoured Merseyside, a deputation led by Tom Fraser met Maudling to argue for increased incentives. Maudling replied that it was not a question of money, and that if it was he 'would be battering on the Chancellor's door' (SRO 1959f). Vauxhall simply refused to consider Scotland.

The Scottish Council was not privy to these discussions or the lengthy defence which Maudling provided. As a result, Lord Polwarth immediately condemned the Board of Trade. In an interview with *The Scotsman*, Polwarth argued, '. . . that the operation of the government's policy has quite clearly failed to take into account the respective needs of the various areas in terms of unemployment'.[36] Polwarth's attitude was entirely understandable, but not necessarily correct. Maudling *had* promised Vauxhall significant incentives, but the American controlled firm had proved intransigent. For the moment, it seemed that Scotland must rely on British investors.

At this stage BMC's expansion plans were as advanced as Ford's and Vauxhall's. Following the initial refusal, the company submitted an alternative scheme. The plan involved reorganisation in Birmingham and new developments in Scotland, South Wales and Merseyside. Their blueprint called for:

---

[34] *Daily Telegraph*, 23 Feb. 1960
[35] *Financial Times*, 29 Feb. 1960
[36] *Scotsman*, 27 Feb. 1960.

- A new tractor and heavy commercial vehicle plant in Scotland to employ 5,700.
- A new press shop in South Wales and an extension to their radiator factory at Llanelli, employing an additional 4,200.
- Transferring their washing machine plant to Merseyside, with 1,000 new Development Area jobs.
- Building a depot at Swinnerton to employ 1,000 people on crating and packaging duties.
- 1.4 million square feet of new buildings in Birmingham as part of the reorganisation package, involving no increase in employment.
- A new nightshift at Oxford to employ 1,900 men. (PRO 1960h).

Maudling was very enthusiastic about this plan; it involved 11,000 new Development Area jobs and a massive increase in output. Although it remains difficult to identify the selection criteria, it *is* clear that BMC's negotiations were handicapped by the firm's existing geography, and the failure to rationalise in the 1950s.

The main part of BMC's expansion would free space at Longbridge, and nominally raise capacity to 850,000 cars and 150,000 tractors. This would allow Longbridge to replace truck production with the 1100/1300 and mini ranges, and centre small car manufacturing in the Birmingham area. But because of the chaotic way that the company had developed, Leonard Lord faced other location priorities. BMC's components subsidiary, Fisher and Ludlow, illustrated these constraints. Although the Midland's firm specialised in body pressings, it also produced a range of domestic appliances. The company's ideal solution would have been to secure *in situ* expansion for both activities, but the government and BMC knew that washing machine production was inherently footloose. As a result, the project was targeted for relocation. In Llanelli's case, BMC already owned a local radiator plant, and the proposal to establish a new press shop could be characterised as consolidation rather than displacement. In both cases, BMC's federated structure offered opportunities for relocation which the Ford and Vauxhall schemes necessarily excluded.

Sims and Wood (1984, p.25) have characterised the BMC plan as a clever circumvention of state control by 'relieving present factories of their marginal functions'. This is only partly correct. BMC's structure did afford a greater

opportunity for decentralisation, but only because the firm was more diverse. Unlike the American-owned producers, BMC had grown through amalgamation and merger, and was consequently more vulnerable to discriminatory policies. On the one hand, there was a greater spread of production facilities, on the other, the corporate culture encouraged internal and geographic division. This meant that whereas Ford and Vauxhall would not even countenance Scottish locations, BMC considered a northern move acceptable, *if* appropriate compensation was forthcoming.

The Bathgate project was nevertheless controversial. Officials had warned the Scottish Secretary that 'a tractor factory would not be regarded by Scottish opinion as a satisfactory substitute for a car factory' (SRO 1960a). The Minister of Housing and Local Government had also criticised the principle of a 'package deal', but his criticisms were dismissed in committee. When BMC's plans were announced, there was a mixed reaction. While the local press welcomed the deal, the STUC's general secretary George Middleton launched a scathing attack on the Board of Trade's impotence, 'If BMC get away with a tractor factory - which uses light plate rather than strip steel - the Board of Trade cannot put much pressure on other firms to build motor cars in Scotland'.[37] For his part, Leonard Lord emphasised the social benefits of the project, arguing that the plan would, '. . . serve the national interest in two ways - by enabling the expansion to be achieved and by raising the prosperity of some of the less buoyant areas of Britain' (Sims & Wood 1984, p.25). While Lord's words *may* indicate support for a general relocation policy, Sims and Wood go too far in suggesting that Lord supported interference with his own company. Rather, Lord appreciated the opportunities which relocation afforded within a second-best world.

Rootes was the last of the Big Five car manufacturers to choose a Development Area. As outlined above, the company had delayed becoming involved in detailed negotiations until the other firms had selected sites. In 1958 however, Rootes had made contacts with development agencies in the Scotland and the North East. By

[37] *Daily Herald*, 21 Dec. 1959, an article entitled 'Jobs by Tractor', argued that a tractor plant was a much more realistic prospect for a Scottish location because 'tractors are a lot less complicated than cars and have fewer components'. Middleton is quoted in Sims & Wood (1984, p. 26).

July of that year, it seems that Rootes already favoured Scotland, and detailed surveys were commissioned for sites in Brookfield, Georgetown, Linwood and Longhaugh. A detailed account of subsequent negotiations is provided by Sims and Wood (1984, pp. 26-32).

The tide of events was certainly slow, with the Rootes brothers securing a number of guarantees from local government before signing contracts. Indeed, it was only when the company had raised the necessary finance that direct negotiations began. As the Henshaw brothers note, '. . . it seems that one factor above all others influenced Lord Rootes to opt for a Scottish location' (1988, p.24). This was the personal interest of Harold Macmillan.

Under acute political pressure, Macmillan had established informal contact with the Rootes brothers in 1959. In November, the Prime Minister joined a shooting party at the family's Perthshire estate. Macmillan's aristocratic tendencies had been the subject of press criticism for some time, but this was not a social call. It seems that Macmillan used the opportunity to persuade William and Reginald that the Midlands was not an option. Macmillan had good reason to press for a Scottish option. Still mindful of the Conservative's poor election showing, the Prime Minister wanted to secure the benefits of 'downstream' industrial development around Ravenscraig. A large car plant at Linwood would go a long way towards absorbing the steel plant's output.

A formal announcement was not made until September 1960. The long delay was caused by protracted negotiations over incentive payments. These talks led Scottish Office and Board of Trade officials to question the company's sincerity (SRO 1960b). Nevertheless, a substantial aid package was agreed. At one stroke, the Pressed Steel expansion was confirmed, and Scotland gained the automotive complex demanded in the Clyde Valley Plan. Unfortunately, the Rootes brothers' hesitation was indicative of a wider deterioration in business confidence (see§3.4). This was occasioned by a sharp downturn in the motor industry's prospects.

Rover's position is instructive here. Having been refused permission to expand in Birmingham, the company submitted new proposals in February 1960. These envisaged a new engineering and research block in Birmingham, together with a

972,000 square foot development in Cardiff to employ 3,700. Even at this stage, Rover was undecided about which activities to relocate. Tentative plans centred on a second Land Rover production line, but this was conditional on maintaining strong sales growth (PRO 1960j). The priority for Spencer Wilks remained additional space *in situ* to allow a re-organisation of his plant's cramped Solihull facilities. But once the Distribution of Industry Committee had sanctioned the new plans, Rover found itself facing very different circumstances. The depression of 1960/1 and selective hire purchase controls dramatically cut the demand for new vehicles. While total UK motor vehicle production dropped from 1.9m in 1960 to 1.5m in 1961, Solihull's output fell from 51,584 in 1959/60 to 47,345 in 1961/2 (Austin Rover 1985). This proved more than enough to force the cancellation of Rover's Welsh adventure.

The point is that the motor industry expansion plans were based on distinct market forecasts. In 1960, an article in the *Economist* had warned that the motor firms might not be able to sell all the cars they wanted to produce in the new factories. The piece argued that, 'All methods of forecasting future home and export sales are largely hit or miss'.[38] For smaller firms such as Rover, even small fluctuations could spell disaster. For larger firms such as BMC, these fluctuations hindered cost recovery, but were not allowed to derail long term expansion.[39] As George Harriman explained:

> Never in the past, viewed over a reasonable period, has our industry in general, or have we in particular, been wrong in pursuing a policy of expansion. All previous advances in productive advances in productive capacity have been quickly justified. The world is still hungry for motor vehicles, and what we are now spending can be considered as the premium necessary to insure the future.[40]

Standard's predicament confirmed the trend. Crippled by mounting losses and a huge bank overdraft, Alick Dick finally succeeded in engineering a take-over by

---

[38] The *Economist*, 'The motor map redrawn', 5 Mar, 1960.

[39] See Williams *et al* (1994, pp. 146-51) for a discussion of the cost recovery issue.

[40] *BMC annual report 1960*, p.15. Compare this confident statement with the following extract from Standard's Board Minutes Dec. 5 1960: 'The directors have been able to fulfil by a good margin the forecasts they made in August 1959, when the tractor assets were sold to Massey Ferguson Limited. A few months ago however, a very sharp and adverse change came over that section of the British motor industry in which Standard is engaged. Although this may be a passing phase, Standard, being one of the smaller units in the industry, are less well placed to bear the brunt of reduced sales' (MRC 1960a).

Leyland.[41] But the carefully prepared Group Development Plan was already in turmoil. By February 1960, overproduction was running at 500 cars per month, and the board was forced to sanction a wave of redundancies (MRC 1960b). By May 1962, a feasibility study was recommending the abandonment of the Speke #2 project 'until such time as we have fully exploited our present resources' (MRC 1962b). This proposal was agreed by the board of directors within 24 hours, who resolved that 'there was no case economically for the Speke #2 site' (MRC 1962a). For both Rover and Standard, cyclical downturns and competitive pressures had brought expansion and modernisation into question. This would produce a troubled legacy for the British Leyland Motor Corporation.

By December 1960, Macmillan's new distribution policy had borne fruit. Under the government's direction, the majority of new motor industry investment had been successfully diverted towards Development Areas (Table 6.6). With the exception of certain local industrialists and the Scottish press, these investments had been warmly welcomed. Both officials and ministers expressed the hope that they would lead to further regional industrial development.

TABLE 6.6

MOTOR INDUSTRY EXPANSION, 1960-63

Date of Announcement	Company	Site	Anticipated Capacity	Anticipated Employment
21 January 1960	BMC	Scotland,	250,000	5,600
		S. Wales,		4,200
		Liverpool		1,500
3 February 1960	Ford	Halewood, Liverpool	200,000	8,000
12 February 1960	Standard Triumph	Speke, Liverpool	50,000	4,500
26 February 1960	Vauxhall	Ellesmere Port	100,000	7,000
20 September 1960	Rootes	Linwood	150,000	7,000

Source: Wilks (1984, p.77)

Yet within the new approach there were certain contradictions. Initial IDC refusals had been followed by a free-for-all in which businesses were left to select their preferred locations. This led to a situation where the British-owned firms of

[41] Barclays had granted Standard an overdraft of £9 million by January 1961, Whisler (1995, p.24).

Rootes and BMC had secured apparently marginal locations in Scotland. The American-owned subsidiaries had both established in Merseyside, where cost expectations were lower and component firms were closer. There is nothing to suggest that this reveals any bias in government/industry relations, nor that foreign-owned firms were able to exert undue influence. But there is reason to suggest that the American companies benefited from a more professional approach. Ford and Vauxhall demonstrated greater resolve in excluding Scottish options and more alacrity in selecting final sites. In part, this was because the subsidiaries were better run than their British counterparts, but there were other factors at work.

These factors may be highlighted using a game theoretic framework. Traditionally, economic history and game theory have been uneasy bedfellows. While economists eagerly embraced the ground-breaking work of Von Neuman and Morgenstern (1947), historians have been less willing to adopt these new methods. A brief survey of core economic history journals (*Journal of Economic History*, *Explorations in Economic History*, *Economic History Review*) confirms this impression.[42] But even where game theory has been applied to historical problems, a great deal of controversy has been aroused. One such example is an article by Carlos and Hoffman (1986) on the early nineteenth century North American fur trade. This used newly developed models of bargaining under incomplete information to explain why the Hudson's Bay Company and Northwest Company failed to conclude a profit maximising agreement despite operating as a duoploy 'unhindered by antitrust legislation'. In a perceptive comment, Nye (1988, p.680) outlined the limitations of their approach:

> Models of bargaining and co-operation among small numbers of individuals are difficult to develop because so much depends on crucial assumptions about individual behaviour. The literature on bargaining that Carlos and Hoffman cite does little more than demonstrate that 'tough bargaining' can lead to negotiation breakdown. The models have limited predictions, are difficult if not impossible to test, and rest on more stringent assumptions than are common even in rarefied formal theory. Given the limitations of our theoretical knowledge about individual response in small numbers, it is not

[42] Two notable exceptions are Grief's (1996) recent survey of medieval family firms and Treble's (1989) examination of pay negotiations in the early twentieth century British coal industry.

surprising that formal modelling of complex arrangements has not proven more fruitful.

In terms of the motor industry case studies, it is clear that the same qualifications apply. Many of the assumptions necessary for a formal analysis are untenable.[43] Nevertheless, the ideas and terminology associated with game theory can help us to conceptualise the situation. For example, if we consider the strategies available to the motor firms, we can clearly identify three options: compliance, compromise or withdrawal. But whereas the American-owned firms possessed creditable exit strategies, British firms faced a number of constraints. Chief amongst these was the impossibility of relocating abroad, and the need to secure expansion on a number of Midlands and South East sites. Moreover, firms did not face a simple two player game involving government and producer, but rather a six-cornered struggle with imperfect information and a distinct first-mover advantage. Since suitable locations were limited, the companies with the most creditable bargaining position and the keenest negotiators were liable to get the best sites.

Viewed in these terms, BMC was a prisoner of its history and geography. Its federated structure weakened its bargaining position and made peripheral locations more acceptable. Rootes suffered because its dictatorial owners devised a flawed bargaining strategy. Previous location bargains and close ties with the state led the Rootes brothers to believe that they could engineer a compromise. They failed to recognise the new rules governing state-industry relations. When William and Reginald realised their mistake, Scotland remained the only viable Development Area location.

In many ways, the Rootes' error could be seen as evidence of a failure in the British system of personal capitalism. This system allowed individuals to dominate decision making, removing the checks and balances which might have corrected policy mistakes.[44] In a similar way, BMC's plight can be linked to the tardy development of organisational capabilities and integrated plant structures in

[43] These include the existence of common knowledge, the belief that individuals must be optimisers, and the notion that each player must be capable of unlimited computational ability. For a survey of these ideas see Binmore and Dasgupta (1986).

[44] Church's recent examination (1996) of the managerial culture in BMC makes many similar points.

postwar Britain. But this should not be read as a wholehearted endorsement of Chandler's thesis. Rather it demonstrates that at one moment, and in specific circumstances, British capitalism was outmanoeuvred by American interests. This meant that the marginal firms of Rootes and BMC secured marginal locations. In these circumstances, the issue of compensation was vital.

In November 1959, the Scottish Secretary offered the following instructions to the newly formed BOTAC:

> I realise that it is intended to operate a much tougher IDC policy, but I do not think that this negative pressure is likely to succeed by itself. We must be able to hold out a really substantial positive inducement . . .which would go some way towards offsetting the real economic disadvantages of Scotland. I would accept that it must be limited to a very few large projects which would be of particular benefit in forming points of wider industrial growth and such limitation would amount to discrimination in favour of the few. But the whole essence of our policy is to offer discrimination by favourable treatment in a variety of ways to firms who are prepared to take the risks . . . (SRO 1959c)

As we have seen, the Scottish Office was successful in securing certain assurances on the scope of financial incentives. During negotiations, Maudling himself stressed the potential benefits available to relocating industries. According to evidence presented to the Estimates Committee in 1962, BOTAC was 'under instructions' to sanction awards to the motor firms. Board of Trade under-secretary Welch's evidence hinted at a schism between politicians and officials, suggesting that, '. . . the instructions of Ministers in effect precluded us from considering the reasonableness of the cost per job' (HMSO 1962, p. 60). According to Welch, once the decision had been made to render assistance, BOTAC was reduced to a mechanical assessment of relocation expenses. Once again, civil servants had been removed from the policy-making loop.

For their part, the motor firms were adamant that financial incentives should fully compensate them for extra locational costs.[45] Under the Local Employment Act, the Board of Trade was empowered to:

[45] For example, on 12th October 1960 BOTAC minutes made the following observation on BMC's attitude: 'After the visitors had left, the Committee discussed the matter and were of the opinion that the company had regarded it as a basic principle that it should be compensated for all costs in excess of those which would have been incurred by expansion in the Midlands' (PRO 1960a).

- acquire land and buildings and to build factories and other premises for sale or leasing
- make building grants to undertakings providing their own premises
- make loans and grants to undertakings for their general purposes.

In the case of the motor industry, finance would be provided through repayable loans covering building/equipment costs, and Section 4 grants to reimburse 'unusual initial expenses' arising from relocation. In both cases, BOTAC would examine applications to verify the legitimacy of the claim. Building loans proved easiest to assess. This was because the Board of Trade was responsible for site construction. Loans for plant and equipment were more problematic, and involved a greater degree of negotiation. A typical loan settlement would involve a two year deferral of repayments charged at an annual interest rate of 5.5%, with fixed yearly repayments.[46] However, the most animated discussion centred on grants.

The motor firms' attitude was aptly summarised by a Board of Trade dispute with BMC in 1960. When the company acquired the Bathgate site, the National Coal Board charged the firm a £1000 'sterilisation fee' to pay for mineral rights. As Macbeth explained:

> You might think that £1000 is a pretty small sum for a large motor corporation to be worrying about, but our problem is that there is a whole series of transactions of this kind and that BMC, apart from being compelled to do something they don't really want to do, are rather under the impression that people are trying to milk them in the process (SRO 1960c).

During negotiations, the firms supported their grant claims with detailed schedules and documentation. Again, Standard's submission was typical (Table 6.7).

[46] These figures are based on records contained in MRC (1960-63c) and PRO (1960e).

TABLE 6.7

STANDARD TRIUMPH - ESTIMATE COST OF LIVERPOOL DEVELOPMENT PLAN, FEB. 1960 (£)

	Total Cost	Duplication	Expansion and/or improvements
Assembly shop	175,000	133,500	41,500
Services:			
Air	10,000	5,000	5,000
Cooling water	15,000	7,500	7,500
Electrical equipment	20,000	10,000	10,000
General equipment	15,000	15,000	
Unloading bay equipment	4,500	4,500	
Body-in-white stores	150,000	150,000	
Paint plant	937,500	452,500	485,000
Trim shop and stores	175,000	108,500	66,500
Trim make up and stores	100,000	51,000	49,000
Finished body stores	150,000	150,000	
Despatch bay equipment	4,500	4,500	
Subtotals	1,756,500	1,092,000	664,500
Dismantling, transfer and re-installation of press shop equipment	122,000	122,000	
Total costs	1,878,500	1,214,000	664,500

Note: each heading was supported by a detailed schedule of expenditure.

Source: MRC (1960e).

But in all cases, BOTAC managed to exercise a measurable degree of control. Negotiations reduced grant assistance from the requested £13.81 million, to just under £3.4 million (Table 6.8). This figure represented the maximum allowable expenditure which the Board's officials were willing to sanction. There was however a Scottish bias in the aggregate cost per job. The Rootes and BMC

projects returned figures of £2,700 and £1,890 respectively; the corresponding amounts for Ford and Standard were £1,360 and £1,190 (HMSO 1962, p.57).

Table 6.8 provides details of the total aid package agreed by July 1962. These payments represented a substantial capital injection into the motor industry. When combined with sales forecasts, the figures projected profits in the short to medium term. The long term expectation was that prime costs would fall into line with established sites and that component firms would migrate to the regions (MRC 1959a). Although motor industry bosses later criticised the deals, the compensation packages persuaded firms to relocate rather than shelve investment plans.[47] The commercial judgement was that the projects remained viable and worthwhile. It is a mistake to claim, as Scott (1996, p.55) does, that efficiency was ignored in favour of short term employment. For the industry, the short term attracted compensation, the longer term promised commercial success.

TABLE 6.8

FINANCIAL ASSISTANCE GRANTED TO THE MOTOR INDUSTRY

(JULY, 1962)

Firm	Grant applied for £ million	Grant offered £ million	Total assistance offered £ million
Standard Triumph, Liverpool	1.21	0.52	5.37
BMC:			
Bathgate	6.0	1.03	10.73
Kirkby	*	0.22	5.02
Ford, Liverpool	1.0	0.05	10.33
Rootes, Linwood	1.5	0.45	9.65
Vauxhall, Liverpool	4.1	0.65	3.35**

Notes: * Kirkby application included in Bathgate total.

** Preliminary figure only.

Source: HMSO (1962, p. 116). Figures and firm identity verified in PRO (1960d).

[47] Typical of later criticisms is the following extract from Geoffrey Rootes' memoirs (1991, pp. 75-6):

'Another factor which caused us difficulty during the late 1950s and early 1960s was the government policy of endeavouring to disperse industry to Development Areas, where unemployment was high. This would have been well if - metaphorically speaking the government had used the carrot rather than the stick. In other words if government had given sufficiently attractive inducements to persuade industry to go the Development Areas, but in fact the inducements in the way of loans and grants were not sufficiently attractive, and the Government therefore resorted to refusing IDCs in the main industrial areas and by this means forcing companies which wished to expand to go to Development Areas'.

According to Parsons (1986, p.111), the Local Employment Act and motor industry initiative arrived between policies. The Act fell 'between the end of economic management and the introduction of economic planning in the following year, and the 'Brighton Revolution' of 1960 . . . neither here nor there: neither expansionary or disinflationary, 'muddling through' or 'regional planning'". In practice, Maudling favoured an approach founded in *real politick*. This allowed industrial steering away from the congested South and Midlands, but imposed few controls on reception areas. IM6 had adopted procedures to match these ambitions, but the department remained fundamentally insecure when challenging entrepreneurial freedom.

It is worth focusing on the years between 1958 and 1960 for three very important reasons. First, this period witnessed the Board of Trade's earliest moves towards accepting a coercive distribution programme. Henceforth, the tactics of industrial intervention were flexible, and the government's threats more credible. This paved the way for the strategic rethink associated with growth point theory and allowed the acceptance of an interventionist agenda. The second reason is that motor firm negotiations became part of a process of forced ideological realignment. While civil servants remained opposed to coercion, motor industry intervention educated Board of Trade officials to the possibilities of market challenge. Finally, the negotiations had an impact on motor industry performance. By studying these talks we can appreciate the nature of the financial bargains and the historical context of relocation. Too often these details have been obscured by inaccuracy and political propaganda.

§6.4 Policy Developments

Policy developments after 1960 have attracted much more comment than the tactical realignment in 1958. During 1960, political expediency continued to dictate policy. IM6 took its lead from Maudling, and policy remained unfocused and *ad hoc*. In subsequent months, this approach was challenged on three levels: internal, operational and theoretical. This challenge forced the adoption of macro-planning solutions more than twenty years after Barlow had first reported.

The internal challenge began in 1961. Doubts were expressed because of the economic downturn and the reduction in steerable projects. A letter from Whitehouse to Welch caught the mood of the time, arguing that the stream of industry moving to Scotland was slowing down to a trickle, and that although, '. . .we are always trying to bring some reason to the minds of those who expect a BMC or British Oxygen every week, bodies like Scottish Council and the local authorities soon grasp the fact that were are now showing Scotland to very few people'.[48] In this context, a coercive approach rekindled important questions about policy costs. The principal concern was not locational inefficiency, but project cancellation. While officials had become reconciled with the production question, they remained unwilling to jeopardise potential investment.

These doubts culminated in the commissioning of a study into 'the real damage done by a IDC policy' (PRO 1962a). The project centred on an analysis of 87 firms who had been refused IDCs between 1 July 1958 and 30 June 1962.[49] The results are summarised in Table 6.9.

TABLE 6.9

PLANS OF 87 FIRMS WHOSE IDCs WERE REJECTED

	Number of firms	IDCs rejected Area (Sq. Ft)	%
Decided to move to a new location	34	2,460,992	57
Decided to develop in same area	36	781,555	18
Still seeking new location or approval in same area	10	223,900	5
Project abandoned or deferred	7	862,300	20
Total	87	4,328,747	100

Source: PRO (1962b)

As can be seen, only seven firms were known to have definitely abandoned or cancelled their expansion plans. In no case was it possible to confirm that an industrial company's plans were frustrated by the lack of an IDC. Of 70 firms whose plans were known, half decided to move production to a new location, and

[48] Welch's reply highlighted an important truth. He countered that '. . . successes in the last eighteen months had depended to a very considerable degree on the motor industry, but informed opinion seemed to be that the new capacity would not be fully used before 1970' (PRO 1961b).

half found means of developing at or near their intended site. In total, ten firms had decamped to development districts, and eleven firms moved to overspill reception areas.

The study demonstrated two things about regional policy operation. The first was the continued lack of performance monitors. In July 1972, the House of Commons Expenditure Committee was to comment that, 'There must be few areas of Government expenditure in which so much is spent but so little is known about the success of the policy' (HMSO 1972, para. 172). This problem plagued policy administration and, on occasion, left IM6 struggling to defend its existence. But the need for a study demonstrated something far more important - doubt. The Board's acceptance of the regional policy portfolio had been based on informational asymmetries between the state and entrepreneurs. Where businesses lacked full knowledge, it was IM6's duty to correct these failings. The coercive element had been added in 1958/9 by political pressure. Although officials had dutifully followed ministerial leads, this sat uncomfortably with their free market sympathies. Despite the accumulation of research and experience, officials still sought reassurance.

The second element which contributed to the reorientation of policy was operational: *how* to persuade industrial capital to relocate. The Board of Trade's failure to capitalise on its motor industry projects, or attract alternative enterprises, raised serious questions about the Local Employment Act. The intention had always been to use the motor industry as a springboard for economic regeneration. While Liverpool was sufficiently close to the Midlands to draw on existing suppliers, Scotland faced a different problem. Although BMC could boast of 28 Scottish components suppliers in 1963, the truth was that indigenous capital was either unwilling or unable to compete with Midlands suppliers.[50] Conversely English firms expressed little interest in relocating north of the border. On the one hand, Scottish companies were wary of committing resources to a demanding and potentially volatile customer, on the other, Midlands based firms were able to

[49] A similar, but larger scale project was later completed as part of the 'Inquiry into location attitudes and experience' (DTI 1973b).
[50] *The Scotsman*, 13 April, 1963.

undercut their Scottish competitors without relocating (Sims & Wood 1984 pp 36-45). As Cameron and Clark noted (1966, p.41):

> The motor industry, in which technical linkages are said to be of prime importance, has sited in Scotland without attracting the expected component complexes, because the scale of production is too small to allow the components manufacturers the economies of scale achieved within their Midlands plants. For the motor industry, as a whole, Scottish development represents de-concentration, and it is cheaper for Scottish based firms to import components from England, where the economies of scale and concentration are so pronounced that they can absorb the transport costs of components to Scotland.

The failure to attract new industry was a concern for both ministers and officials. By 1962, the Board of Trade was already considering possible remedies. A memorandum prepared in January 1962 made a scathing judgement on the current system. A seven point critique concluded that inducements should be made more attractive (PRO 1962c). This was because current policy assumed that firms would be willing to meet extra costs themselves to secure new premises. In prevailing circumstances, this was deemed unrealistic (PRO 1963c).

With Maudling now Chancellor following the Profumo reshuffle, there was a strong regional policy constituency in Westminster. Officials accepted that existing payments were inadequate and a series of proposals culminated in the 1963 Local Employment Act. This introduced reforms ranging from a standardised grant system to accelerated depreciation allowances. From this point on, businesses would be fully informed of potential benefits while the principle of *selective* financial assistance was abandoned. In his address to the British Institute of Management, Courtaulds' chief economist A.M. Alfred spelt out what this meant for investors:

> The effect of these two provisions means that in a Development Area in Great Britain 60% of the investment is recovered in the first year after investment, and 73% by the second year. . .When a change of plan to locate a factory in a G.B. development is made, it may involve extra capital or running costs; but the financial provisions are such that you can afford to have your gross capital profits on plant raised by perhaps a third, or your profit reduced by a quarter; or a combination of the two. If you in fact incur no extra capital or running costs then your profitability . . . would rise by 30% for a Great Britain Development Area. . .The Government whether it realises it or not, have [sic] provided some powerful financial incentives. It is up to industry to make full use of them (PRO 1963b).

The theoretical challenge came from the regions, and was keenly associated with growth point theory. The key document was the Toothill Report, which promoted a practical blueprint for regional planning success (Scottish Council 1961). Like the Cairncross report of 1953, the study had been commissioned by the Scottish Council, and was aimed squarely at policy makers. Its terms of reference were straightforward, 'To examine the position and prospects of the Scottish economy and the factors which influence the growth and location of manufacturing employment and to make recommendations'.

Parson's study links the report to the 'revolution in business thinking' occasioned by the Brighton conference (1986, p.115). Viewed in these terms, the document reflected a shift within the business community towards the acceptance of limited government planning in the private sector. Its recommendations ran to nine pages and eighty one measures, and centred on area development, communications, R&D, education and training, fiscal policy, housing, industrial relations, management and rating. The report suggested that the government should be involved less in industrial steering, and more in infrastructure development. It advocated an integrated planning effort to create the right conditions for sustained economic recovery.

The Toothill Report enjoyed a mixed response. Board of Trade officials were pleased to see that a private survey had pre-empted 'the full dress official enquiry' which some departments had mooted (PRO 1960c). But the report achieved such public notoriety that the Cabinet felt obliged to act. On 15 December 1960, Maclay circulated a paper to the Economic Policy Committee advocating an official inquiry into Toothill's findings. A detailed resume of the inquiry's work can be found in Culingworth (1979), suffice to say that it endorsed a move towards growth points together with more powerful financial inducements (PRO 1961a). When the cabinet reviewed these recommendations, the decision was taken to concentrate regional policy towards development nodes in the North East and Scotland (PRO 1961a). On a practical level, this meant that the Board of Trade's *ad hoc* methods were given a firm direction and new impetus.

The theoretical challenge resulted in several important initiatives. Soon after the Toothill Report, two White Papers were published on Central Scotland and the

North East (HMSO 1963a, 1963b). Both plans were closely associated with Lord Hailsham's appointment as Minister of the North East in 1962. Hailsham was charged with following up and developing the suggestions of Toothill and the cabinet's steering committee. The White Papers therefore reflected a new orthodoxy: growth zones, modernisation and the need to transform Britain's antiquated industrial landscape.

These ideas were given even more prominence after Edward Heath's appointment as Board of Trade President in 1963. Heath was keenly interested in the regional debate, and in a celebrated first act, changed his official title to Secretary of State for Industry, Trade and Regional Development, and President of the Board of Trade. According to Parsons (1986, p.20), the change was, ' indicative of a new desire to push the regional aspect of government economic policy to the fore, and to shift the presentation of government location of industry and local employment policy into an explicitly regional gear'.

But Heath inherited a problem. The North East and Scottish plans called for a generous proportion of public expenditure to be devoted to two areas without any consideration of Britain's other regions (McCrone 1969, p.226). As the new president realised, the principal purpose of regional planning was to spread resources in a thought out and rational manner. The days of selective intervention were at an end. While it was possible to contain the Scottish and NE plans within existing frameworks, a more comprehensive approach was needed. Accordingly, Ministers convened a working party to examine how the regional plans could be incorporated into a national strategy.[51] The working party met for the first time in October 1963. Its final report was completed before polling day, and marked the final triumph of the regionalist approach.

---

[51] Papers and minutes from the Working Party on Distribution of Industry can be found in PRO (1964a). At the time of writing many of the documents remain closed under the thirty years rule. The following quotation comes from an undated collection of 'Minutes and memoranda':
'The chairman recalled the events that led to the setting up of the Working Party. Ministers had agreed that, while the regional plans for Scotland and the North East could be continued within existing policy in the short-term, the concepts underlying these reports were in some respects incompatible with existing policy. They had therefore decided that a review was needed. Behind these recent events lay doubts about the suitability of the Local Unemployment Act for dealing with the problems now forecast'.

A detailed account of the working party's meetings and recommendations would be a fitting epitaph to this study. Although the interim reports are available at the Public Record Office, a majority of the group's briefing papers and minutes remain restricted. The available papers clearly show how regional planning was accepted at ministerial and official levels. But they also show how the tactics of industrial intervention had changed. The Board of Trade's stress on entrepreneurial freedom and market solutions had been replaced by a willingness to confront industry and relocate industrial capital. While 'regionalism' implied a new level of strategic thinking, the most significant change in regional policy administration was a willingness to challenge the market.

§6.5 Conclusion

The period from 1958 to 1964 marked a sea-change in the administration and philosophy of British regional policy. A Conservative administration, nominally committed to rolling back the frontiers of the state, oversaw the introduction of a fundamentally coercive and dirigiste planning regime. The main reason for this is clearly linked to the rise in regional unemployment and the collapse of staple industries in the North and Scotland. But these forces were mediated through an administrative and political structure which shaped policy response.

Politicians and officials had already accepted that a measure of market failure existed in location decisions. Hitherto, policy had been couched in terms of information provision and establishing effective communications. The growing regional crisis forced the government to reconsider its options and promote a coercive remedy. For IM6, this created a problem. Its civil servants were uncomfortable imposing solutions on entrepreneurs. In response, officials removed themselves from the decision-making loop. Meanwhile, the department sponsored a number of policy reviews which re-examined their conception of externalities. From 1958 to 1964, this produced an irresistible tide of evidence, forcing officials to accept a new approach.

The motor industry provided an opportunity and a catalyst for this change. In the beginning, politicians used IM6's economic expertise to counter the motor bosses' claims. Even though the deals were executed at ministerial level, they provided an

impetus for policy reappraisal. The subsequent failure of plants to deliver downstream development led to operational reviews and growing calls for a coherent national location strategy. These moves culminated in the triumph of a regionalist approach embodied in growth point theory and the Scottish and North East White Papers. Labour would develop these themes in 1964, when the Board of Trade finally surrendered its regional policy portfolio to the DEA.

For the motor industry, the new plants were an expression of confidence. Negotiations had secured valuable incentive packages, which promised quick returns. If Development Area plants were a 'second best' solution, they enjoyed important compensations. One of these only became apparent in the 1970s, although an FBI research officer had seen the possibilities a decade earlier. Commenting on Local Employment Act, one K.M. Hall noted,

> I have a dangerous and probably unjustified suspicion that part of the reason for the motor firms recent rush to the development districts is the desire to get the government deeply committed to the continued prosperity of the motor industry as a precaution against the possibility of withdrawal of protection from continental competition in the home market at some point in the future (MRC 1960d).

PART III

REGIONAL POLICY ASSESSMENT

7 Motor Industry Cost Analysis

§7.1 Introduction

Many studies classify the motor industry as 'footloose'. This is because it enjoyed a relatively free location choice during its early years. It produced a high value good, neither tied to materials nor markets, requiring little heavy duty machinery. But technical advances transformed this profile. As demand outstripped existing manufacturing facilities, location became a key production variable.

The state sponsored decentralisation of the British motor industry has attracted much adverse comment. In a recent study commissioned by the Economic History Society, Church (1994, p.59) maintained that 'there is no dispute over the adverse effect, as yet unquantified, on companies' activities of regional economic policy introduced by the British government in the 1960s'. This pessimistic interpretation has become part of the regional policy literature, as shown by Scott's uncritical assessment (1996, p.55) of the 1960 measures. This chapter examines these claims from a quantitative perspective.

The following chapter uses the techniques endorsed by the Clay Committee and employed by Luttrell in his 1962 NIESR survey. Luttrell's study provides the intellectual validation for our approach. This is because it focused directly on spatial cost criteria and policy performance. Studies of industrial location can be roughly divided into two camps, those undertaken in support of various theoretical views, and those undertaken for purely industrial or policy analysis. Luttrell's work fell into the latter category, and it established a methodology which provided an objective measure of the costs of industrial relocation. However, it was also an explicit part of the Clay Committee's research initiative. As such, it used the performance criteria sanctioned by government, and implicitly related outcomes to the specific goals and targets of IM6 intervention. These goals centred on minimising operating costs for individual manufacturers, while securing the broader macro-social benefits of production externalities and lower regional unemployment.

Ideally, costs should be compared over as many years as possible. However, lack of relevant information limits us to an analysis with a 1972 benchmark. This constraint is related to the nature of cost controls in postwar British motor manufacturing and firms' unwillingness to publish information. The only significant archive providing access to internal documents is provided by the British Motor Industry Heritage Trust, and this operates a stringent thirty year rule. In a similar vein, much of the relevant government material at the Public Record Office is deemed commercially sensitive and remains subject to restriction. But the 'static' approach does offer some important advantages. It highlights the 'continuing cost differences' which dominated the postwar efficiency debate, and it avoids the distortions caused by OPECI. Where possible, estimates are used to estimate previous costs and extrapolate beyond 1972, but the aim is to provide an economic assessment of the annual operational costs of Development Area manufacturing.

This analysis suggests that although relocation did increase production costs, there were important compensations in the form of regional development incentives and lower labour costs. Scottish sites in particular were disadvantaged. The chapter suggests that previous studies have underestimated the role of financial incentives and other subsidies in redressing transport costs, and that the failure of sites in Scotland is linked both to location, and the competitiveness crisis afflicting British motor manufacturing.

§7.2 Industry Cost Structure

The starting point for any cost analysis is to identify the major items of expenditure. One may begin by examining the evidence collected by the Census of Production. Although these figures are not strictly comparable over time, they do offer a rough guide to cost structure (Table 7.1).

TABLE 7.1

MOTOR INDUSTRY COST STRUCTURE - MAJOR ITEMS

	As Percentage of Gross Output	
	1973	1980
Labour Cost	28.8	27.8
Bought-in Services:	6.3	7.0
transport	na	1.5
insurance	0.3	0.3
rent/rates	0.5	0.8
Purchases	60.3	61.0
Energy	1.7	3.0

Notes: Due to rounding errors and the omission of minor items, columns do not sum to 100.

Source: CSO (1974, 1981).

The two biggest categories are labour and purchased materials. The former reflects the premium placed on well-trained car workers, the latter illustrates the relatively high bought-out content of British vehicle production (Table 7.2). The third largest element is *Bought-in Services.* This includes areas such as advertising, postage, bank charges and transport. But it does not include *all* carriage costs. This is because companies operate their own freight divisions, whilst purchases often include a hidden transport element. Evidence from the UK input/output tables supports this view, suggesting that suppliers favour 'delivered' rather than 'ex-works' pricing (Tyler *et al* 1988, p.33). Other important categories of *Bought-in Services* are vehicle hire, insurance and rent & rates. Finally, energy charges comprise about 3% of gross output.

TABLE 7.2

SPECIMEN PERCENTAGES OF MATERIAL COST OF CARS ACCOUNTED FOR BY BOUGHT-OUT COMPONENTS

Company	%
GMC (US)	46
Ford (US)	61
Chrysler (US)	60
Toyo Kogyo (Mazda)	54
Toyota	59
Nissan	65
Chrysler (UK)	71
Vauxhall (UK)	85

Source: HMSO (1975b, p.19)[1]

As far as this chapter is concerned, costs are relevant only in so far as they vary over space. Elements which represent a small proportion of total costs may seem unimportant, but as Tyler and Kitson (1987, p.63) argue, this does not undermine the case for examining geographical variations. This is because the traditionally low level of profitability in British manufacturing means that even minor costs can become significant. As Chapter Three explained, the postwar decline of British motor manufacturing directly relates to unfavourable international trends in price and quality competitiveness. Thus the cumulative effect of even minor variations may prove significant.

§7.3 Spatial Cost Profile

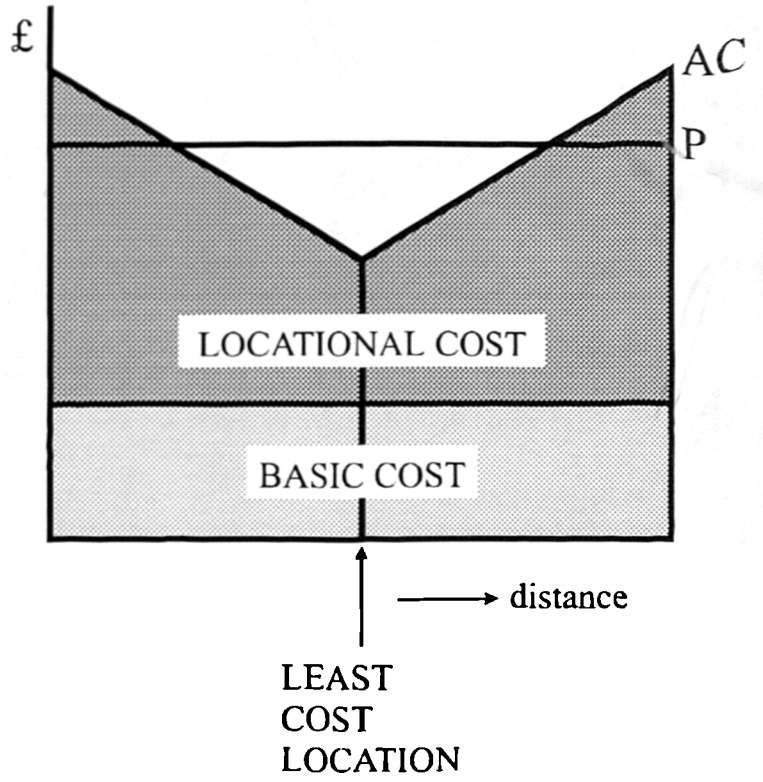
Having established an industry cost profile, the next stage is to consider which costs vary over space. Here one can be guided by a host of post war studies. These include the theoretical texts of Hoover (1949), Greenhut (1956) and Isard (1956), together with empirical investigations of plant location (Luttrell, 1962). One of the more useful frameworks is provided by Smith (1966, pp. 100-101):

[1] These findings can be corroborated with further evidence. For example, Bhaskar's (1975) analysis supports this general pattern, while industry-wide studies by Maxcy & Silberston (1959) and Silberston & Pratten (1967) arrive at similar results. The parliamentary enquiry supplied no estimates for British Leyland.

In order to produce a given quantity of any goods, the manufacturer must assemble at one point the necessary amounts of four factors of production - land, labour, capital (including materials and machines), and enterprise. The cost of each of these is likely to vary from place to place. In considering the cost of factors of production it is useful to distinguish between basic cost and locational cost [Figure 7.1]. The basic cost is the sum which must be paid irrespective of location, e.g. the cost of raw material at source, or the cost of labour at its cheapest point. The locational cost is the additional expenditure incurred in bringing the factor to the place where it is needed (i.e. the factory). Just as each factor of production has its basic and locational cost, so the two elements can be distinguished in the total cost of any firm or industry. It is obvious that least cost (maximum profit) location will be where total locational costs (the sum of the locational cost of all the factors) are at minimum, for each factor's basic cost, is of course, constant over space.

FIGURE 7.1

SPATIAL COST PROFILE

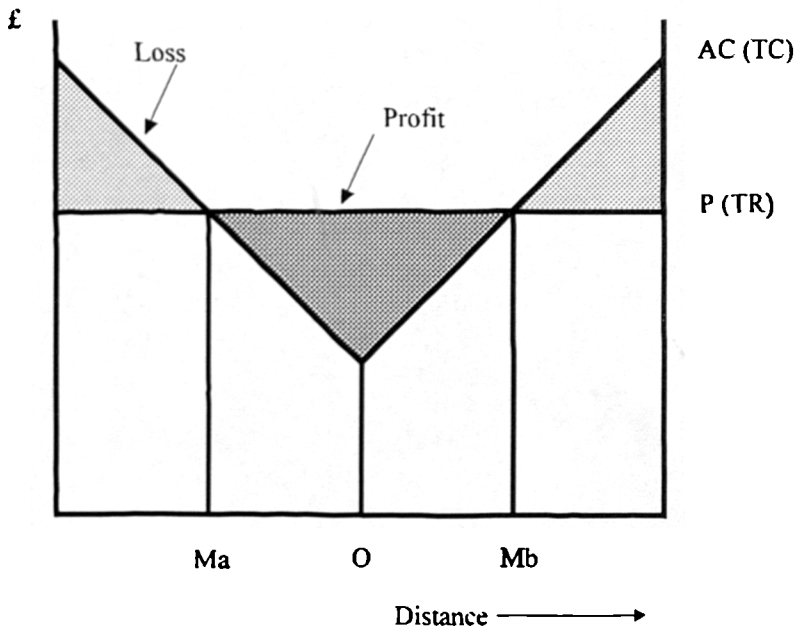


Source: Smith (1966, p.100)

Smith used these ideas to develop a space cost curve (1981, p.114). By plotting cost and price on the vertical axis, and distance along the horizontal axis, he derived an average cost curve based on spatial deviations. Using various simplifying assumptions, he was able to equate average cost with total cost, and price with total revenue. The result was Figure 7.2, where O represents the profit maximising location, and M_a and M_b the spatial limits to profitability.

FIGURE 7.2

SPATIAL COST CURVE



Source: Smith (1981, p.113)

The space cost model provides this chapter with an appropriate theoretical vocabulary. In Smith's phraseology, it is possible to identify seven areas of *basic cost* where locational penalties accrue (Tyler *et al* 1988, p.29):

- Rent
- Rates
- Energy

- Insurance Payments
- Labour Costs
- Transportation
- Industrial Services

This list can be further reduced by restricting our analysis to those categories deemed significant by the motor manufacturers themselves. There are two sources for this exercise - private site surveys, and evidence presented to the Trade and Industry Sub-Committee (HMSO 1973a, 1973b).

In the former case, any investigation is hamstrung by a lack of available documents. As Bloomfield (1972, p.93) noted, 'The full technical reports on plant location are rarely seen by outsiders . . . Most information on location decision making depends heavily on press releases and speeches'. Papers retained at the Public Record Office often include minor details, but these relate to physical characteristics rather than financial costings (PRO 1953-54a). What evidence there is suggests that labour availability and *in situ* expansion remained the manufacturers' key concerns (PRO 1954a).

The evidence from the Trade and Industry Sub Committee is more reliable and complete. The study began in 1971 as part of an inquiry into public money in the private sector (HMSO 1972). Subsequent changes in the Industry and Finance Acts persuaded committee members to take a fresh look at regional development incentives. Their final report was published in December 1973, and called for a strengthening and redirection of policy.

The report is invaluable in identifying areas of continuing locational cost. This is because it offered a platform to companies threatened with the loss of operating subsidies. Under the 1972 Industry Act, the government had proposed phasing-out the Regional Employment Premium. Most businessmen opposed this idea. It was in their interests to cite *all* locational costs in their evidence to parliament. As the final report commented, 'It is unusual in an inquiry of this kind to find so many non-Government witnesses, including both CBI and TUC, in broad agreement on a measure as controversial as REP, and the remainder at least not actively disagreeing. On the other hand, one would hardly expect the recipients of a benefit

- and that includes both employers and employed - to want to see it withdrawn' (HMSO 1973b, p.74).

The first point one can make is that three areas of cost - rent, rates and insurance premiums - are ignored by the motor builders. This is probably because they constitute such a small percentage of gross output. Their omission might also be explained by low property prices in the regions. Low land values tend to depress both rent and rates, while the value of insured assets is correspondingly reduced. In these circumstances, a Southern plant is likely to have a higher *locational* cost than its Development Area counterpart. However, a substantial body of evidence has legitimately questioned the effects of local taxation on profitability (Bennett 1986). Local variations in business rates increased from the late 1960s throughout the 1970s. But econometric evidence suggests no long term relationship between rate burdens and changes in regional unemployment and employment. Moreover, metropolitan authorities in Merseyside, Greater London and Birmingham charged similar tax levels. In these circumstances, it seems wise to respect the motor firms' judgement.

The energy component can be discounted in a similar manner. Heat, light and power have been widely available in Britain for many decades. Where new amenities are provided, they constitute establishment rather than operational expense. Relevant locational costs accrue only if power is more expensive in the regions. Neither Luttrell nor the motor firms provide any evidence to support this theory.

This discussion leaves three areas of cost with a significant locational element - labour, industrial services and transportation. Together they accounted for nearly 31% of gross output in 1980. When one adds the embedded freight charge in purchases, it becomes clear that a over a third of basic manufacturing costs may vary over space. But these costs must be restricted to two headings: labour and transport-related expenditure. This is because there is no available proxy for the assessment of regional service costs. In any eventuality, the lack of locally available sub-contractors will be reflected in the transport function. This remains the best surrogate for the loss of what Townroe (1971) called *localisation*

economies, defined as agglomeration economies which are external to the firm but internal to the industry.

§7.4 Output Calculations

If we follow Luttrell's methodology, the first stage of analysis must be to ascertain plant output. This will allow cost comparisons to be made on a per unit basis, the Clay Committee's favoured spatial performance criteria (see §4.3). This exercise is fraught with difficulty. This is because most of the decentralised motor plants also produced components and sub-assemblies for other sites. We can illustrate the difficulties involved by considering the example of Speke.

Speke #1 was developed from the old Halls pressing plant - and specialised in body production. Speke #2 was finally completed in the late 1960s, and included a paint and trim plant together with a modern assembly line. Initially, #2 built bodies for the Stag and shipped the shells on to Canley. But by 1972, the Toledo was completed on site, with only the Dolomite finished in Coventry (Collins & Stratton 1993, p.112).

Speke was originally part of the Standard Triumph empire. By the early 1970s, it was controlled by BLMC's Specialist Car Division. But these changes in ownership did not rationalise material flow. Because the plant produced both bodies and cars, it is difficult to express output in terms of units of production. But by calculating output in terms of *equivalent final units of production*, estimates are possible. The basis for this technique is a detailed costing of a Triumph production car from the early 1950s (Table 7.3). This document identified body and body detailing as representing 40.6% of manufacturing costs. Applying the same margins to 1972 data, one can express the Stag, Dolomite and TR6 production of 34,500 bodies as being equivalent to 14,007 finished cars (34,500 x 0.406). Thus, if we express output in terms of equivalent final units of production, Speke produced a total of 40,556 vehicles (26,549 finished cars and 14,007 equivalent units). The output calculations for the other plants are equally straightforward, and are summarised in Table 7.4.

TABLE 7.3

UNIT FACTORY COST OF A MASS PRODUCED CAR, 1952

Component	Material (£)	Labour (£)	Total (£)	%
Engine	42	10	52	14.9
Gearbox	11	6	17	4.9
Front Suspension	13		13	3.7
Rear Axle	8	4	12	3.4
Brakes & Hydraulic Equipment	8		8	2.3
Chassis:				
Frame	1	5	6	1.7
Radiator	6		6	1.7
Road Springs	4		4	1.1
Exhaust System	1		1	0.3
Shock Absorbers	5		5	1.4
Hand Brake	1		1	0.3
Hoses and Clips	1		1	0.3
Petrol Pipes	1		1	0.3
Fastenings	1		1	0.3
Propeller Shaft	2		2	0.6
Steering Unit	3	1	4	1.1
Wheels and Tyres	24		24	6.9
Electrical Equipment	27		27	7.7
Instruments	6		6	1.7
Tool Kit	1		1	0.3
Assemble Complete Car and Finish		5	5	1.4
Body Mounting Details	7		7	2.0
Body (ex Mulliners)	142		142	40.6
Miscellaneous	4		4	1.1
	319	31	350	100.0

Notes:

Figures rounded to nearest pound.
Based on Triumph Sports Car.

Source: MRC (1952)

TABLE 7.4

PLANT OUTPUT, 1971-72 (EQUIVALENT UNITS OF PRODUCTION)

	Halewood Component Output	% of Cost of Final Vehicle	Halewood Equivalent Output	Ellesmere Port Component Output	% of Cost of Final Vehicle	Ellesmere Port Equivalent Output	Speke Component Output		% of Cost of Final Vehicle	Speke Equivalent Output
Finished Cars			242,624			127,201				26,549
Transmissions:										
Gearboxes	507,000	4.9	24,843	148,000	4.9	7,252				
Rear Axles	507,000	3.4	17,238	148,000	3.4	5,032				
Bodies:							(Stag)	4,500		
							(TR6)	13,500		
							(Dolomite)	16,500		
								34,500	40.6	14,007
		Total	284,705			Total 139,485				Total 40,556

	Linwood Component Output	% of Cost of Final Vehicle	Linwood Equivalent Output	Bathgate Component Output	Bathgate Output
Finished Cars			144,861		23,000
Transmissions:					
Gearboxes	30,139	4.9	1,477	na	
Rear Axles	40,139	3.4	1,365	na	
Bodies:	45,139	40.6	18,326	na	
		Total	166,029		Total 23,000

Sources:

Austin Rover (1985)
Bhaskar (1975)
Chrysler UK (1973)
Ford Motor Co. (1973)
Vauxhall Motors (1973)

For example in 1972, Ford's Halewood complex comprised a Body Plant, an Assembly Line and a Transmission Works. The site was linked to Dagenham by the nearby London to Liverpool railway, and the company had developed its own freight terminus. The whole system was designed to ease material flow, forming a conveyor extension between Merseyside and the South East. As well as complete vehicles, Halewood also produced over 507,000 gearboxes and 507,000 rear axles for other plants. In terms of equivalent final units of output, the transmission plant contributed 42,081 equivalent units of production (gearboxes: 507,000 x 0.049 = 24,843; rear axles: 507,000 x 0.034 = 17,238). This raised total plant output to 284,705 equivalent units of production (242,624 + 24,843 +17,238).

In many ways, Vauxhall's Cheshire plant was Halewood's twin. The site was originally developed because of its excellent road and rail links and its proximity to Ellesmere Docks. It became a fully integrated car works in 1965, when a combined press shop and assembly plant was built. By 1972, the factory had become the home of Vauxhall's small family cars, making the HB Viva from March 1966 to 1970, then the more angular HC, which was supplanted by the Chevette in 1975 (Collins and Stratton 1993, pp.78-81).

Ellesmere Port produced its own engines, bodies and radiators. It shipped components to Luton, Dunstable and Bedford, and received electronic parts and other items from GM's network of British plants. Because representatives of Vauxhall were not examined in the original parliamentary enquiry, it is more difficult to quantify the factory's component output. Two sources - the company memorandum and Collins and Stratton (1993) - confirm that axles and gearboxes were shipped to the South East. A reasonable assumption would be that all Luton/Dunstable vehicles used these Merseyside components. On this basis, Ellesmere Port would be manufacturing 148,000 axles and transmissions for other sites, amounting to 12,284 equivalent units of production (gearboxes: 148,000 x 0.049 = 7,252; axles: 148,000 x 0.034 = 5,032). This would provide total annual production for 1972 of 139,485 (127,201+7,252+5,032).

Linwood and Bathgate complete the output analysis. Linwood was conceived as a single product site, but by 1972 it was building the Imp and Arrow (Hillman

Hunter) range, as well as sub-assemblies for Chrysler's Coventry plants. Again, to convert this to equivalent final units of production, we should account for component production. Fortunately Waymark (1983) provides a product breakdown for 1971. This lists average weekly production of 3,800 sets of body panels, 3500 gearboxes, and 3700 rear axle assemblies. Working on the basis of a fifty week year, this provides annual totals of 190,000 bodies (3,800 x 50), 175,000 gearboxes (3,500 x 50) and 185,000 axles (3,700 x 50). If we now deduct those parts destined for Linwood final vehicles, this leaves net figures of 45,139 bodies (190,000 minus 144,861 finished cars), 30,139 gearboxes (175,000 minus 144,861 finished cars) and 40,139 rear axles assemblies (185,000 minus 144,861 finished cars). Applying the cost criteria from Table 7.3, we arrive at Linwood's final output figure of 166,029 (bodies: 45,139 x 0.406 = 18,326; gearboxes: 30,139 x 0.049 = 1,477; axles: 40,139 x 0.034 = 1,365; finished cars: 144,861).

Bathgate presents a curiosity for our output analysis. Because it produced commercial vehicles and tractors, its linkages with other plants were very limited. This reflects its peripheral role within the British Leyland organisation. No breakdowns are available for component output, and contemporary accounts provide little indication that component production was a major activity on the shop-floor. Accordingly, the recorded output of 23,000 finished vehicles is regarded as a fair indication of total productive activity. This estimate completes our analysis of plant output. The next stage is to consider transport-related costs.

§7.5 Transportation and Related Costs

Freight Costs

Freight costs represent the first important element of transport-related expenditure. Neo-classical theory defines optimum location through the transport function. According to Weber (1929), the best site for an industrial plant minimised the aggregate costs of bringing in materials and shipping out finished goods. In this scheme, labour and agglomeration economies were *diverting forces* able to deflect, but not replace, the transport solution.

A more modern view is reflected in Table 7.1. Here the low value of the bought-in transport category provides a *prima facia* rebuttal to Weber's model. However, Tyler and Kitson (1987, p.61) suggest that the measure captures only one half of all transport expenditure. More fundamental critiques are provided by a 1984 study by PIEDA (a private economic consultancy) and Edwards (1975), who question the scale of geographical transport cost variations. The PIEDA survey discovered regional differences of just 1%, whilst Edward's concluded:

> . . . in very general terms, the indications are that the difference between the highest cost regions (Northern Scotland and East Anglia) and the least regions (East and West Midlands and to some extent the South East) was (in 1963) relatively small, amounting to not more than 2-3% of value added by the manufacturing sector (and less than 1% of sales value).

Such findings led many to argue that transport costs occupy a minor role in the decision making process. The implication is that geographically isolated plants suffer no cost penalty.

These studies must be reconciled with evidence from the motor manufacturers. In 1971, Lord Stokes told the Trade and Industry Sub-Committee a very different story:

> We have a factory in Scotland (Bathgate). . . if you take a five ton truck, for example, it costs £18 to ship the bits up from England which have to be put into the truck in the factory in Scotland and then 75% of the trucks are sold in the southern half of England and we reckon it costs us another £40 to ship the truck back again either to ship it from London or whatever port it goes from or sell it to the domestic customer. Therefore you have a penalty of £58 on each truck which costs about £1500 or £2000. It is quite a heavy price to pay for having a factory up in Scotland (HMSO 1972, p.194).

Lord Stokes echoed the objections of all the major car firms. According to Ford, Vauxhall, Chrysler and BLMC - the decentralisation programme had *necessarily* increased freight charges. This was because of both distance and fragmentation

effects. In the former case, goods had to be carried further, incurring greater *line-haul* costs. In the latter case, decentralisation required extra journeys - increasing *terminal* charges. These arguments can be illustrated through a plant by plant analysis of the Parliamentary evidence.

According to British Leyland, the company's Merseyside complex attracted significant freight penalties. These related specifically to the cost of importing engines and transmissions from the West Midlands. In 1972, the company costed these shipments at £502,000 per year.[2] This produced a transport cost penalty of £12.38 per unit (502,000/40,556), representing 1.3% of the retail price of a Triumph Toledo.[3]

Ford assessed transport costs by employing a simple counterfactual. By assuming that Halewood did not exist, they were able to calculate the annual freight savings of a Greater London (Dagenham) location. In 1971/72, the savings were put at £742,000. Many of these costs originated in extra transports from Dagenham (engines) and South Wales (radiators).

Interestingly, Ford believed that Halewood actually *reduced* the company's delivery costs. This was because the plant was conveniently placed in relation to the Northern and Midlands markets. Ford put this benefit at £100,000 per annum, yielding a recurring aggregate freight cost of £642,000 or £2.25 per equivalent vehicle (642,000/284,705). In 1972, this represented 0.25% of the final retail price of a 1.1 litre Escort.[4]

We know that Ellesmere Port produced its own engines, bodies and radiators. It also shipped components to Luton, Dunstable and Bedford, and received electronic parts and other items from GM's network of British plants. In 1972, the extra cost of these transports was estimated at £750,000. Unlike Ford, Vauxhall believed that its distribution costs were increased by a West coast location. This

[2] Unfortunately, no distinction was made between component and distribution costs. The figure must therefore be regarded as net of any *delivery* savings.
[3] Based on the retail price of the cheapest 2 door model, £786 list, £951 including purchase tax. Prices supplied by the National Motor Museum, Beaulieu.
[4] Based on the retail price of a Ford Escort 1100 2 door, £727 list, £878 including purchase tax. Prices supplied by the National Motor Museum, Beaulieu.

was because the company used Felixstowe rather than Merseyside for exports. This incurred additional costs of £100,000 per year, making a net recurring freight cost of £850,000 per annum, or £6.09 per equivalent unit (850,000/139,485). In 1972, this represented 0.74% of the final retail price of a 1.1 litre Viva.[5]

In all of the Merseyside plants, it is clear that an East coast location incurred substantial freight handicaps. *A priori,* one would expect Scottish factories to incur proportionally greater charges. BLMC's Bathgate plant provides the first case study.

The original site had been chosen following an exhaustive search. The firm's executives had visited estates at Johnstone, Bathgate, Grangemouth, Glenrothes and Dundee (Sims & Wood 1984, p.24). Eventually, the company chose Bathgate because it offered the best rail and port connections. But this still left a 300 mile journey to the Midlands. For reasons which were discussed in §6.4, component firms did not follow BLMC. Instead, commercial vehicle production relied on imported English parts. By June 1971, the company ran 40 trucks a night to Scotland - producing a 'perpetual drain' on working capital (HMSO 1972, p.193).

Lord Stoke's estimates of a £58 per unit penalty can be confirmed by BLMC's cost memorandum. In 1972, the company assessed extra freight expenses at £1,284,000. Using Bhaskar's 1972 output figures, this produces an extra cost per vehicle of £55.83 (1,284,000/23,000). On a lorry costing £1500, this equated to a 3.7% tariff.

Linwood completes the freight analysis. There were two dimensions to the plant's sourcing problems. On the one hand, component suppliers did not establish in Scotland. As Table 7.5 indicates, nearly 80% of Chrysler's parts were obtained from the Midlands and South of England. On the other hand, Linwood disrupted inter-plant linkages. In 1971, the company put these costs at £1.1 million.

[5] Based on the retail price of the cheapest 2 door model; £682 list, £826 including purchase tax. Prices supplied by the National Motor Museum, Beaulieu.

TABLE 7.5

PERCENTAGE OF VENDOR SUPPLIED PARTS BY DISTANCE FROM LINWOOD, 1972

Distance	% of Total Purchases
Within:	
50 Miles	4.0
50 - 100 Miles	0.5
100 - 150 Miles	0.5
150-200 Miles	9.0
200-250 Miles	8.5
250-300 Miles	39.0
300-350 Miles	18.5
350-400 Miles	20.0

Source: Young and Hood (1977, p.263)

Chrysler went on to analyse delivery costs. On the domestic front, the company demonstrated that 85% of its cars were sold to dealers within 150 miles of Coventry. By contrast, only 15% of sales were within the same distance of Linwood. Since Chrysler refused to absorb these costs into delivery charges, £400,000 a year had to be written off by management. Similarly, export movements were costed at an extra £100,000 per annum. These costs arose because 40% of foreign sales were shipped through Liverpool, and 45% through London and the South East. In both cases, Coventry enjoyed a tangible cost advantage.

So, taking the freight costs together, Chrysler estimated an annual deficit of £1.6 million for 1971/72. This produces a transport cost per unit of £9.64 (1,600,000/166,029), equal to just over 1.5% of the retail price of the plant's core product.[6]

Inventory Costs

Inventory costs represent another important transport related expenditure. In general, an isolated plant will maintain higher inventories due to the increased

[6] Based on the price of a standard Hillman Imp, £642 including purchase tax (Henshaw & Henshaw 1988, p.142).

distance from its suppliers. If the plant feeds products to more centrally located sites, stocks may also be higher. The motive is to avoid 'walking and waiting' time (Williams *et al* 1994, p.48). Only by maintaining flow, can labour's share of value-added be reduced. The consequences of poor material flow are serious, involving short-time working and difficulty in meeting delivery schedules. These very problems were encountered at Bathgate in the early 1960s, where supply breaks were blamed for aggravating labour relations (PRO 1964a).

Unfortunately, by increasing their stocks, companies expose themselves to higher operating penalties. This is because the extra floor space, insurance and related expenditure tie up working capital. At Linwood, it was found necessary to hold an additional two days of parts, together with extra equipment spares to cover maintenance problems. Furthermore, an additional one day's stock was held of all company manufactured parts delivered to or from Linwood. These costs were put at £200,000 in 1971, and aggregated at £700,000 for the period between 1963 and 1970. This was based on an additional stock-holding of £1,000,000. Similarly, BLMC calculated that inventories attracted annual interest charges of £27,000 in Bathgate, and £26,000 in Liverpool. If we assume that interest was charged at 20% of the total stockholding value (as in Linwood), this implies total additional stocks of £135,000 in Scotland and £130,000 in Liverpool. However, the memoranda recognised that interest charges represented the best proxy for locational expenses.

Halewood and Ellesmere Port employed a different inventory policy. They allowed parts to be retained in transit - avoiding on site expenses. But this required an extra £249,000 worth of Ford parts and £100,000 of Vauxhall components to be on the road at any one time. Vauxhall estimated that this traffic attracted interest charges of £10,000 per annum. Because this expenditure constituted a year-long drain on working capital, both stock *and* interest charges have been included in the final calculations.

Travel and Communication Costs

Travel and communication costs arise because both personnel and information have to be exchanged between plants. This involves additional expenditure on telephones, telex and data processing, together with travel expenses for key

workers. It might be expected that there is high locational element in this category. But it should be noted that even small moves incur penalties. This is because dislocation rather than distance determines the communications need.

Of the Merseyside plants, only Vauxhall provided an estimate for this category. This put communication costs at £30,000, and travel expenditure at £12,000 per annum. Ford provided a gross figure for *all* decentralised plants. Nevertheless, it is possible to estimate Halewood's share according to the employee distribution between sites.[7] While this is not an ideal solution, it does have the advantage of relating communications expense to manpower control. This yields an annual penalty of £158,000, which makes Chrysler's figure of £150,000 seem conservative.

The variations between Vauxhall's and Ford's figures suggest a methodological problem. Both plants produced a similar product mix, and both head offices were in the South East. For Ford to spend three times as much on travel and communication would imply that the firms had widely different organisational structures. Since we know that that was not true, there must be some other explanation. The most likely reason is that Vauxhall did not cost the time lost in travelling between sites. Given the similar sizes of Halewood and Ellesmere Port, an upward adjustment of £100,000 in Vauxhall's costs would therefore be appropriate.

BLMC's figures must also be inferred from the data. Working on the assumption that travel and communications are a function of employee distribution, it is possible to estimate these costs according to the average cost per employee in Halewood, Ellesmere Port and Linwood. This cost equates to £13.88, which when applied to Bathgate and Speke, would give figures of £62,252 and £55,520 respectively. Because of BLMC's complicated plant network, these estimates are likely to understate actual costs.

[7] Thus total communication costs for Halewood, Swansea and Belfast were put at £200,000. Employee distribution was Halewood 12,945 (78.8%), Swansea 2.383 (14.5%) and Belfast 1,101 (6.7%).

Duplication of Services & Staff Relocation

The final transport related costs are service duplication and staff relocation. The former refers to the expense of shadowing existing business functions, the latter to grants and expenses payable to mobile employees. Only Chrysler provided estimates in the first category. The company argued that Linwood required an extra 175 staff, costed at £500,000 pa. Duplicated functions included engineering support, production management and financial control. Since the other motor firms ignored this category, one must assume that they were unable to identify any extra requirements. The conclusion must be that Chrysler either represented a special case (unlikely), or that Ford, Vauxhall and BLMC failed to develop an appropriate methodology. Because of this impasse, it has been decided to provide two cost schedules for Linwood: Scheme A will include Chrysler's estimates of duplication; Scheme B will ignore the category. In this way, it should be possible to compare decentralised plants on a consistent basis, while providing an upper-range figure for management expenses.

Staff relocation costs are much more straightforward. In Chrysler's case, after a large initial outlay (£200,000 from 1963-67), the annual recurring penalty was put at £20,000. Vauxhall's estimate was on a par at £12,000 pa, while Ford's estimate of £70,000 for its regional plants can be estimated to £55,000 for Halewood. By contrast BLMC, provided no estimate for this area. But any amount was likely to be small in relation to turnover and total labour costs (Halewood alone faced a weekly wage bill of £800,000). Given these circumstances, it is reasonable to retain the relocation category *without* any additional estimates for Bathgate and Speke. A summary of these and other costs is provided in Table 7.6.

TABLE 7.6

TRANSPORT-RELATED COST PENALTIES (£)

	Halewood	Halewood Cost per Equivalent Unit	Halewood Cost per Unit Total Ford Output	Ellesmere Port	Ellesmere Port Cost per Equivalent Unit	Ellesmere Port Cost per Unit Total V'hl Output	Speke	Speke Cost per Equivalent Unit	Speke Cost per Unit Total Triumph Output
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Component Freight	742,000			750,000			-		
Distribution Costs	-100,000			100,000			-		
Total Freight	642,000	2.25	0.77	850,000	6.09	3.09	502,000	12.38	3.61
Inventory	249,000			110,000			26,000		
Travel and Communication	158,000			142,000			55,520		
Duplication of Services							-		
Staff Relocation	55,000			12,000			-		
Total	1,104,000	3.88	1.32	1,114,000	7.98	4.01	583,520	14.39	4.19

	Linwood Schedule A	Linwood Schedule A Cost per Equivalent Unit	Linwood Schedule A Cost per Total CUK Output	Linwood Schedule B	Linwood Schedule B Cost per Equivalent Unit	Linwood Schedule B Cost per Total CUK Output	Bathgate	Bathgate Cost per Equivalent Unit
	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
Component Freight	1,100,000			1,100,000			-	
Distribution Costs	500,000			500,000			-	
Total Freight	1,600,000	9.64	5.54	1,600,000	9.63	5.54	1,284,000	55.83
Inventory	200,000			200,000			27,000	
Travel and Communication	150,000			150,000			62,252	
Duplication of Services	500,000			-			-	
Staff Relocation	20,000			20,000			-	
Total	2,470,000	14.88	8.55	1,970,000	11.87	6.8	1,373,252	59.71

Sources:

Austin Rover (1985)
Bhaskar (1975)
Chrylser UK (1973)
Collins & Stratton (1993)
Company Accounts
DTI (1973a)
Ford Motor Co. (1973)
Vauxhall Motors (1973)

This profile of transport-related costs raises methodological and practical concerns. The figures involved are certainly striking, constituting 2.3% of Ford's total 1972 pre-tax profits, 6.1% of British Leyland's profits, 154% of Chrysler United Kingdom's (CUK) profits, and 25.9% of Vauxhall's losses. Given 1972 cost structures and output levels, an autonomous five per cent increase in these charges would have reduced pre-tax profitability by a further £55,200 at Ford, £97,839 at BL and £123,500 at Chrysler (Table 7.7). Under the same assumptions, Vauxhall's losses would have risen by £55,200. This is important because we know that oil and fuel prices rose 132% from 1972 to 1977 (HMSO 1982).

TABLE 7.7

EFFECT OF 5% INCREASE ON TRANSPORTATION COSTS (£)

	Ford	Vauxhall	BL	CUK
Transport related costs per Table 7.3	1,104,000	1,114,000	1,956,772	2,470,000
5% increase	1,159,200	1,169,700	2,054,611	2,593,500
Increase in Charges	55,200	55,700	97,839	123,500

Source: Company Accounts, Bhaskar (1975).

This analysis might suggest that OPECI unavoidably increased the production costs in Development Area sites. But the ratio between fuel price rises and the Retail Price Index remained stable in the mid-1970s. When this evidence is combined with the small changes in industry cost structure noted in Table 7.1, it implies that transport-related costs may have increased in proportion to general manufacturing expenses.

The second point brings the discussion to the nature of production technology. The Development Area plants had been designed along fordist lines. In the fordist system, success depended on achieving scale economies by expanding output. But as Bhaskar outlined in 1975 (para. 9.29), there remained a fundamental problem:

> The ideal output may be 2 million identical cars per year, but that is not very useful, because under present conditions, there is no chance at all of

> selling that many. Even the more modest compromise of two or three hundred thousand cars per year of one particular model is not easy to obtain. Past experience in the UK has shown that whereas companies may have been able to sell one or two cars at that volume, nobody has even approached the ideal of selling that many of every model in its range. The cost penalties of production below capacity are sufficient to wipe out any gains from the installation of high-volume capacity

The fordist imperative imposed an additional constraint on car manufacturers. Under normal circumstances, economic production was only possible when throughput was maintained at adequate levels. Development Area relocation raised this threshold. In particular, higher terminal costs had to be spread over larger production runs. Similarly, increased line haul costs could only be mitigated by a larger scale of operation. Had these plants operated at their planned output levels, losses per unit would have undoubtedly been lower.

The inability of British motor manufacturers to sell their cars in sufficient volume was intimately related to the competitiveness crisis affecting British motor manufacturing. In the mid 1970s, three official reports tackled this issue: the Ryder Committee focused on the handicap of outdated machinery, centralised corporate organisation and poor industrial relations (HMSO 1975a); the Trade and Industry Sub-Committee stressed over-manning and excess demand (HMSO 1975b); the CPRS (1975) centred on lack of plant maintenance and archaic working practices. All were agreed that once protective trade barriers had been dismantled, British based manufacturers had to accommodate themselves to a new competitive environment. However, British firms discovered that quality and price deficits had developed, and that high volume, high-productivity competition from the continent was difficult to overcome.[8] In this context, decentralisation proved an unwelcome distraction.

§7.6 Labour Cost

Since labour costs play such an important role in the motor industry, one would expect wage differentials to figure prominently in the motor firms' Parliamentary evidence. But the memoranda submitted to the Trade and

[8] See Leech and Cubbin (1978) for a discussion of the price/quality trade-off involved.

Industry Sub-Committee focused on national wage bargaining. By 1972, only Chrysler and BLMC favoured regionally differentiated pay rates, and both firms claimed that inter-regional differences in effort and work quality eradicated any financial gains. The only acknowledged financial consequences of dispersal concerned training, where Ford estimated an additional expenditure of £30,000 per annum.

Despite centralised bargaining, there are reasons to believe that labour costs will still vary with space. This is because of differences in training costs, bonus payments, shift working, payments in kind etc. Following Woo's methodology (1986), it is possible to quantify this effect using the Labour Cost Survey, which began publishing regional breakdowns in 1975.

TABLE 7.8

LABOUR COSTS BY REGION, 1975

(Ave. hourly amount per employee)

	All Manufacturing Industry	Engineering & Allied	Vehicles	Index of Vehicle Labour Costs
	(Total Costs in Pence per Hour)			(GB=100)
North	158.18	160.82	155.98	84
Yorks. & Humberside	153.33	154.40	160.41	86.4
East Midlands	147.80	167.69	187.01	100.7
East Anglia	153.11	151.41	-	
South East	173.37	177.21	200.84	108.1
South West	157.82	161.01	188.05	101.2
West Midlands	160.62	164.57	187.13	100.8
North West	157.22	158.48	176.30	98
Wales	167.09	161.40	169.85	91.5
Scotland	146.87	126.91	163.94	88.3
Great Britain	160.17	166.58	185.65	100.0

Notes:

All figures are quoted net of Regional Employment Premium.
Engineering and Allied Trades are defined as metal manufacturing, mechanical engineering, instrument engineering, electrical engineering, shipbuilding and marine engineering, vehicles and metal goods not elsewhere specified.

Source: Dept of Employment (1977)

Table 7.8 outlines the basic pattern. It can be seen that in 1975, the South East and Wales had the highest per employee labour costs, and the East Midlands the lowest. Nationally, the engineering and allied sector was 4% more costly than general manufacturing industry, while the vehicle division incurred 16% higher costs. In all cases, the South East proved the most expensive location, reflecting a scarcity of labour and a higher than average skill level.

In the vehicle division, the South East retained a strong lead, followed by the South West, with the North and Yorkshire & Humberside bringing up the rear. Woo (1986) was able to divide the car manufacturing areas into three bands: Band 1 included the South East; Band 2 the three non-assisted regions (East Midlands, West Midlands and South West), and Band Three the remaining assisted areas. Scotland, Wales and the North East enjoyed a 12% cost advantage over the South East, and a 3% advantage over Band 2.

Interestingly, the make-up of labour costs also varied between regions. In Scotland, wages and salaries comprised 94% of total costs, while the corresponding figure for the South East was 87%. The South East also had the highest provision for redundancy, while the scarcity of workers and environment made non-monetary emoluments necessary. Training costs seemed to be the only item more costly in the Development Areas, although in both Scotland and the North East salary levels more than compensated for this.

These regional variations in non-wage labour costs have received surprisingly little attention from economists. Data has usually been interpreted on a sectoral or international basis. Typical examples of the former approach are provided by Bates and Reid (1962), Moonman (1973) and Hawkesworth (1977). These studies suggested that fringe benefits alone constituted on average 15% of total pay in the 1960s and 1970s. More recently attention has focused on international comparisons in total labour costs. This has been motivated by discussions over foreign direct investment into Europe (e.g. Taylor 1993), and moves to harmonise employment law under the Social Chapter (e.g. Saint-Paul, 1997). A recent standard undergraduate textbook on industrial location illustrates these deficiencies. Despite exhaustive treatments of location theory,

practice and experience, Harrington and Warf (1995) focus exclusively on wage costs and *national* bargaining frameworks.

The emphasis on national institutions and agreements may be justifiable because employment law is generated by central government. However, the nature of many fringe benefits lend themselves to informal workplace agreements. Moreover, differences in regional labour markets may allow workforces and management to secure concessions from one another. If national wage agreements are in place, it would be reasonable to see discrimination occurring in other areas. For the motor industry, this trend was particularly important in federated firms where different work practices co-existed. Moreover, Chapter 8 demonstrates how management deliberately tried to engineer new forms of workplace organisation in their regional plants. In these circumstances, regional variations in non-wage labour costs should not be unexpected.

The Labour Cost Survey allows us to investigate the annual per employee labour cost differential between the decentralised and traditional motor building regions. The method is quite straightforward. To arrive at annual per employee differences for the vehicle industry, the hourly data from Table 7.8 is combined with information on the actual hours worked per year in the vehicles group. To aid comparisons with previous material, the totals are expressed in both 1975 and 1972 prices:

TABLE 7.9

ANNUAL PER EMPLOYEE LABOUR COST DIFFERENTIALS, VEHICLES GROUP - DECENTRALISED VERSUS TRADITIONAL AREAS

		North West Location		Scottish Location	
		1975 Prices	1972 Prices	1975 Prices	1972 Prices
Saving re	Pence per				
South	hour	24.54	15.65	36.90	23.53
East	£ per year	446.14	284.58	670.84	427.92
Saving re	Pence per				
West	hour	10.83	6.90	23.19	14.79
Midlands	£ per year	196.89	125.59	421.59	268.92

Notes:

Average working year of 1,818 hours, based average hours worked per employee 1975.
Prices adjusted by implied GDP deflator at market prices
Source: Dept. of Employment (1977)

These findings can be applied to individual plants (Table 7.10). With a workforce of 12,949 in 1972, the Labour Cost Survey suggests that Halewood would have enjoyed annual benefits of £1.6m over a Midlands location, and a staggering £3.7m over a Dagenham site. Vauxhall's figures of £1.4m and £3.3m reflect the same relationship (11,490 employees). The corresponding benefits for Speke (based on a workforce of 4,000) would have been £0.5m and £1.1m. In each case it is necessary to take only the relevant counterfactual; this means that Halewood and Ellesmere Port should be compared with South East locations, and Speke with a Midlands site.

TABLE 7.10

ANNUAL LABOUR COST DIFFERENTIALS BY PLANT, DECENTRALISED VERSUS TRADITIONAL AREAS (1972 Prices)

HALEWOOD 12,949 WORKERS	SAVING RE MIDLANDS 125.59 x 12,949 = £1,626,265 SAVING RE SOUTH EAST 284.58 x 12,949 = £3,685,026
ELLESMERE PORT 11,490 WKRS	SAVING RE MIDLANDS 125.59 x 11,490 = £1,443,029 SAVING RE SOUTH EAST 284.58 x 11,490 = £3,269,824
SPEKE 4,000 WORKERS	SAVING RE MIDLANDS 125.59 x 4,000 = £502,360 SAVING RE SOUTH EAST 284.58 x 4,000 = £1,138,320
LINWOOD 8,000 WORKERS	SAVING RE MIDLANDS 268.92 x 8,000= £2,151,360 SAVING RE SOUTH EAST 427.92 x 8,000 = £3,423,360
BATHGATE 4,485 WORKERS	SAVING RE MIDLANDS 268.92 x 4,485 = £1,206,106 SAVING RE SOUTH EAST 427.92 x 4,485 = £1,919,221

Relevant counterfactuals are: Halewood (SE location), Ellesmere Port (SE location); Speke (Midlands location), Linwood (Midlands location); Bathgate (Midlands location).

The Scottish comparisons are equally illuminating. With a workforce of 8,000, Linwood enjoyed a saving of £2.2m over the Midlands, and a benefit of £3.4m above South East England. Bathgate returned figures of £1.2m and £1.9m respectively.

If this methodology is sound, it implies that labour savings more than compensated Ford and Vauxhall for Merseyside's geographical isolation. Similarly, labour savings would have eradicated the freight charges incurred at Bathgate, Speke and Linwood. But this analysis poses problems. The Labour Cost Survey relied on sampling techniques. In the manufacturing sector, 10,500

establishments were approached, and 81% replied. The resulting sample (3.6m employees) represented 54% of the manufacturing workforce. Under these conditions, it is not unreasonable to assume that the survey produced a representative cross-section. However, the estimated cost savings are large enough to suggest extreme caution.

Since the survey reflected actual expenditure, one must wonder why the motor firms did not identify labour cost differences in their evidence to Parliament. Several explanations are possible. First, the companies may have been unaware of variations. Given the poor standards of cost accounting endemic in the British motor industry, this suggestion should not be ignored. Second, as Chapter 8 makes clear, the main labour issues confronting firms were related to workplace organisation and stoppages. In these circumstances, it would not be surprising if cost savings were discounted against output loss and the costs of disruption. This is precisely the argument employed by BLMC in its written evidence to Parliament (DTI 1973a). Finally, the motor firms may have concealed their findings to further their policy agenda. This could have been linked to the retention of REP incentives. In any scenario, it seems that some financial adjustments are justified.

§7.7 Financial Incentives

The issue of financial incentives completes the cost analysis. In 1972, Assisted Area firms benefited from a mixture of capital allowances and operational subsidies. But the original decentralisation programme had relied on investment grants and cheap loans. Ideally, any analysis of locational penalties should therefore reflect (a) the long term benefits of non-commercial borrowing, (b) the discounted cash flow accruing from past investment grants, and (c) incentives payable in the current financial year. Unfortunately, both the motor manufacturers and government proved unwilling to provide detailed breakdowns.

Chrysler supplied the fullest published evidence to Parliament. In 1961/62, the company received three government loans amounting to £9.6m. These loans

were for periods of 15 and 20 years, and attracted interest costs of between 1-1.5% lower than market rates. From 1966, the company also benefited from the higher investment grants payable in Development Areas, while REP became available from 1968.

In 1971/72, Chrysler calculated that the lower interest payments on outstanding loans added £165,000 to the group profit and loss account. In common with the other companies, Chrysler did not attempt to quantify the discounted cash flow benefit arising from grants received. But the company did include grant income of £121,000 for 1971/72, and REP payments of £804,000.

Ford's cost memorandum made no mention of loan repayments and instead concentrated on grant and REP incentives. According to the company's director of finance, Halewood's peripheral location had secured an extra £8.3m worth of investment grants by the early 1970s. No breakdown was given for 1971/2, although REP receipts were put at £788,000. Following BLMC's methodology (see below), it has been decided to average the grants received between 1962-71, and calculate the annual savings in depreciation charges arising. Assuming a writing down allowance of 20% per annum over five years, this means that in 1971/72 investment grants contributed £830,000 to Ford's profit and loss account.[9] While this may seem an arbitrary adjustment, it reflects the continuing financial benefits available to a company established in a peripheral location. If we place Chrysler's grant income on the same basis - averaging total receipts since 1963 and calculating depreciation savings - this raises the benefits from £121,000 to £333,444.[10]

Vauxhall's submission proved the briefest of the five. Apart from a plea to make investment grants payable in cash rather than accelerated depreciation allowances, the company made no mention of either historic or current grant/loan income. Again the focus was on REP payments, which secured funds of £850,000. Nevertheless, it is possible to find a summary of the grants

[9] Thus, £8,300,000 received from 1962 to 1971/72, equivalent to £830,000 savings charged to the profit and loss account per annum.
[10] Thus, £3,001,000 received from 1963 to 1971/72, equivalent to £333,444 savings charged to the profit and loss account per annum.

received by Vauxhall in official records (PRO 1967). These indicate that Development Area relocation earned a net grant advantage of £6,411,895. This produces an annual depreciation saving of £712,433.[11]

BLMC also restricted their analysis to grant and REP payments. The latter qualified for assistance of £352,000 in Bathgate and £303,000 in Liverpool. The two plants also attracted extra capital grants of £2,633,000 and £593,000 between 1966 and 1971. According to BLMC, these grants yielded annual bonuses of £527,000 and £119,000, being the estimated reduction in depreciation and amortisation costs.

This leaves the question of benefits from non-commercial borrowing. While Chrysler provided an estimate employing discounted cashflow analysis, comparisons are missing for Ford, Vauxhall and BLMC. Moreover, government records omit any reference to loans or borrowing conditions. However, we can estimate the amounts involved by using Chrysler's experience as a baseline. If we assume that the same conditions applied to all loans (a twenty year repayment period, with fixed repayments at 1.5% below commercial rates), we might use the data in table 6.8 to calculate annual savings. Thus, Rootes (Chrysler) was granted loans amounting to £9,200,000 in 1962, which brought returns of £165,000 in the base year (1971/72). In other words, for every £1 borrowed in the 1960s, the company earned 1.79 pence back in 1971/72. Applying the same ratio to the other sites, Ford's borrowings of £9,830,000 would have yielded returns of £176,000; BLMC would have earned £174,000 at Bathgate and £86,000 at Speke. Interestingly, Vauxhall declined the offer of loan assistance, instead relying on their bankers 'from whom they could obtain very favourable interest rates' (PRO 1962e). But as these estimates assume identical borrowing conditions, they must be regarded with extreme caution.

[11] Thus, £6,411,895 received from 1963 to 1971/72, equivalent to £712,433 savings charged to the profit and loss account per annum.

TABLE 7.11

FINANCIAL INCENTIVES, 1971/72 (£)

	Halewood	Ellesmere Port	Speke
REP Payments	788,000	850,000	303,000
Savings in Depreciation Charges	830,000	712,433	527,000
Benefits from Non-commercial borrowing	176,000	nil	86,000
Total	1,794,000	1,562,433	916,000

	Linwood	Bathgate
REP Payments	804,000	352,000
Savings in Depreciation Charges	333,444	119,000
Benefits from non-commercial borrowing	165,000	174,000
Total	1,302,444	645,000

Sources:

Bhaskar (1975), Chrylser UK (1973), DTI (1973a), Ford Motor Co. (1973), HMSO (1962, p. 116), PRO (1960d), Vauxhall Motors (1973), Young & Hood (1977, p. 262)

These estimates require some comment. While the figures for REP receipts are unspectacular, there are big variations in depreciation savings. In particular, the Merseyside plants seem to have befitted from generous allowances. This is explicable in terms of the disparate investment strategies employed by firms. Ford and Vauxhall achieved a high level of support because their investment was incremental and sustained throughout the 1960s. Speke benefited from Leyland's decision to centralise sports car production in Liverpool. This enabled all three companies to benefit from the changes in regional policy legislation which made investment grants mandatory in Development Areas.

With Vauxhall, there was a carefully planned three stage investment plan, which saw the completion of new buildings in 1964, and the addition of a new press shop and assembly hall two years later (Collins & Stratton 1993, p.79). This culminated in re-tooling for the HB Viva, which began production in 1966. In Ford's case, initial investment saw the completion of a stamping and body plant by 1964, with the addition of an £8,500,000 transmission plant in 1965. As Chapter 8 explains, Halewood developed into a true multi-product factory, building Anglias, Cortinas, Zephrys, Zodiacs and Escorts throughout its first decade. In Speke's case, we have already seen how the #2 plant was cancelled when the company was forced into a defensive merger with Leyland. However, the new board did sanction additional expansion in 1966, when new press and body shops were constructed for production of the Toledo and the TR6 replacement. By contrast, both Rootes (Chrysler) and Leyland found it difficult to divert scarce resources to their Scottish plants.

Rootes' demise as a British-owned firm was linked to its over-ambitious expansion plans into the small car market. The company wrestled with a severe cashflow crisis, problems with the Imp and an uncompetitive model range. The situation only improved after Chrysler's take-over in 1967, when the new American owners began a big investment programme. Unfortunately, much of this money was spent on organisational change and replacing dilapidated machinery in the Midlands. This meant that Linwood remained largely a one-product plant operating below 50% of its planned capacity throughout the 1960s.

Bathgate's story was linked to complacency rather than crisis. The Scottish plant specialised in producing lorries and tractors. But with the expansion of Leyland into car manufacturing, Bathgate's activities became increasingly irrelevant to the company's core manufacturing business. The successful truck and bus division was progressively starved of funds, and the plant soon began to exhibit many of the problems associated with inadequate investment.

§7.8 Summary

Table 7.12 (p.230) gives a summary of the findings so far. It should be clear from each plant that depreciation and labour cost adjustments are crucial in converting locational penalties into potential gains. Questions now arise as to the accuracy of the figures, and their relevance to wider regional policy issues.

Firstly, one must recognise that the evidence concerns operational penalties encountered at a specific scale of output. This means that few clues are provided about sunken costs or the annual variability in performance. We know from Luttrell (1962) that locational costs will tend to decrease with time, but the Expenditure Committee memoranda provide only cross sectional data.[12] It is therefore impossible (from this source at least) to estimate previous costs, or assess the *extra* strain caused by decentralisation in the early 1960s.

Given the nature of the Parliamentary enquiry, this is hardly surprising. The investigation was an attempt to look at the problem of regional development incentives 'as seen by industry itself'. As most firms made clear, their main problem was the threatened withdrawal of Regional Employment Premium. From this perspective, the submissions naturally concentrated on operational issues.

A potentially more alarming reason for the lack of historical data is that no estimates were possible. This was because the motor firms did not use plants as cost centres. Gilbert Hunt outlined the typical practice, 'We do not make our income statements up showing the individual profitability by plant. . . We take a number of judgements of yardsticks in our plants, which are not necessarily in sterling' (HMSO 1973a, p.58). This system works so long as financial controllers maintain high levels of vigilance. However, by ignoring spatial profitability, there is an inherent procedural weakness. This is because artificially derived performance measures do not have the same immediacy as a monetary equivalent.

[12] The only historical cost figures are supplied by Chrysler. These relate to Linwood's establishment and operation from 1963 to 1970.

The question of extrapolation is also problematic. Since the memoranda present recurring penalties, it might be expected that the data can be automatically applied to subsequent years. But the further from the base year, the less reliable these estimates will be. This is especially important given the changing industrial context of the mid 1970s

The figures themselves are striking. The least robust component is in labour costs. This is because the figures are not directly culled from motor industry sources, and because there is a lack of secondary literature. While this chapter has suggested a reasonable hypothesis for regional variations in non-wage labour costs, it would be prudent to bear these restrictions in mind. The depreciation statistics also present problems. Grant receipts were listed by the motor firms, but they were usually included as annual totals. By contrast, Table 7.11 has averaged grant receipts over the entire period of operation, and calculated the depreciation savings accruing in the benchmark year. This provides a much more realistic measure of benefits, since it recognises the long term rewards associated with incentives, and goes some way towards reconciling operational costs with the continued availability of grant income.

The results suggest that Development Area plants in Merseyside were able to curtail additional operating expenditure and generate valuable returns from their investments. This implies that the compensation package offered by government was sufficient to defray extra freight charges without any adjustment for labour costs. By contrast, Scottish manufacturing sites were unambiguous failures. Operating costs remained high, due to both function and distance. On the one hand, they were isolated from Midlands suppliers, on the other, they were producing marginal products from marginal sites. When the Imp failed, throughput became a crucial issue for Rootes. In a similar way, Bathgate was neglected by Leyland's ambitions in the South. A form of natural selection seems to have ensured that the marginal firms secured the marginal sites.

The data introduced in this chapter represents as detailed a cost analysis as can be expected from diverse and incomplete sources. The inclusion of labour cost

differences and investment grants are a justifiable extension of relevant cost accounting, while the results themselves present a useful snapshot of regional economic performance. The findings demonstrate that the levels of locational penalties - with the notable exception of the Scottish plants - were relatively insignificant in relation to retail price. They also imply that competitiveness remained a major problem. In its discussion of labour problems, Chapter Eight will demonstrate how the failure of regionally produced vehicles was linked to both reliability and design. As we shall see, these were industry-wide problems, in which location played a minor part.

TABLE 7.12

SUMMARY OF LOCATIONAL (COSTS)/BENEFITS, 1972 (£)

Halewood	Location (Cost)/ Benefit	Per Equivalent Unit
Transport-related expenditure	(1,104,000)	
Financial Incentives	1,794,000	
Sub Total	690,000	2.42
Labour Cost Savings	3,685,026	
Total Locational (Cost)/Saving	4,375,026	15.37

Ellesmere Port	Location (Cost)/ Benefit	Per Equivalent Unit
Transport-related expenditure	(1,114,000)	
Financial Incentives	1,562,433	
Sub Total	448,433	3.21
Labour Cost Savings	3,269,824	
Total Locational (Cost)/Saving	3,718,257	26.66

Speke	Location (Cost)/ Benefit	Per Equivalent Unit
Transport-related expenditure	(583,520)	
Financial Incentives	916,000	
Sub Total	332,480	8.20
Labour Cost Savings	502,360	
Total Locational (Cost)/Saving	834,840	20.58

Bathgate	Location (Cost)/ Benefit	Per Equivalent Unit
Transport-related expenditure	(1,373,252)	
Financial Incentives	645,000	
Sub Total	(728,252)	(31.66)
Labour Cost Savings	1,206,106	
Total Locational (Cost)/Saving	477,854	20.77

Linwood (Schedule A)	Location (Cost)/ Benefit	Per Equivalent Unit
Transport-related expenditure	(2,470,000)	
Financial Incentives	1,302,444	
Sub Total	(1,167,556)	(7.03)
Labour Cost Savings	2,151,360	
Total Locational (Cost)/Saving	983,804	5.93

Linwood (Schedule B)	Location (Cost)/ Benefit	Per Equivalent Unit
Transport-related expenditure	(1,970,000)	
Financial Incentives	1,302,444	
Sub Total	(667,556)	(4.02)
Labour Cost Savings	2,151,360	
Total Locational (Cost)/Saving	1,483,804	8.94

Sources: Tables 7.4, 7.6, 7.10, 7.11

8 Labour and Industrial Location

§8.1 Introduction

According to fordist orthodoxy, commercial success derives from product standardisation and labour deskilling. In this schema, internal productivity gains generate cost reductions which widen market potential. Hence the Model T's price was progressively cut by adopting a mass production system which reduced labour content and maintained profit margins.

Subsequent analyses have confirmed labour as the key input in motor manufacturing. The following comments are typical:

> The obvious immediate problem of the car manufacturer may be component costs, but for the sector as a whole the fundamental problem is that at whatever stage it appears, manufacturing conversion requires a substantial physical labour input, and adding value incurs substantial labour costs. The fundamental problem is simply disguised if the manufacture of components takes place at different stages and the work is performed in (legally) separate firms (Williams *et al* 1994, p.19).

In this context, worker quality and effort are critical. The ideal operative is semi-skilled, educated to a basic standard and capable of repetitive and accurate motion. If work quality or effort vary over space, there may be additional locational costs within the labour function. This chapter will test these costs. It will assess whether inferior labour skills handicapped Development Area plants, and if these plants suffered from disproportionately high strike activity. It will then place these findings into a wider historical perspective.

The chapter argues that the Development Area plants are best regarded as the first attempt by car makers to impose fordist practices on British workers. Consequently, a large part of the disruption experienced in the 1960s can be seen as the first stage of a transformation crisis which later affected the whole of British motor manufacturing.

§8.2 The Labour Function (1) Quality

> Few men see the cars being driven off the line. While an assembly line worker is always dealing with a moving car it is never moving under its own steam. The line stands two feet above floor level and moves the car monotonously, easily along. Walking along the floor of the plant as a stranger you are deafened by the whine of the compressed air spanners, you step gingerly between and upon knots of connecting air pipes which writhe like snakes in your path, and you stare at the moving cars on either side. . .This is the world of the operator (Beynon 1984, p.119).

Postwar vehicle production has been dominated by the moving assembly line. Its design has determined not only the pace of work, but the character of the workers. An assembly plant in the early 1960s could be expected to employ over 60% of its manpower in semi-skilled or unskilled grades. In the words of Ben Hamper's *Rivethead* (1992, p.41), the requirement was for 'a bunch of overachieving simians'. But even here, the motor firms criticised Development Areas. According to Ford (1973), Vauxhall (1973) and Chrysler (1973), the outlying regions provided an ill-suited mixture of miners, dockers and petty criminals. High turnover, absenteeism and poor build quality were believed to translate into extra locational costs. As the Ministry of Labour noted, there were doubts about the 'suitability' of the new workforces, and their 'willingness to do an honest day's work for a good day's pay'(PRO 1964b).

These charges may be examined by considering three factors - the recruiting policies employed by firms, the origins and character of recruits, and the training efforts adopted. The first and third elements can help us examine the culpability for alleged problems, while the second helps us to determine the workforce profile. As always, the counterfactual is expansion in the Midlands or South East - where a long tradition of flow production was believed to exist.

Labour Recruitment Policies

When the new factories were announced in the early 1960s, there was a popular belief that localised unemployment in Merseyside and Scotland would quickly disappear. Speaking in the *Liverpool Post* in December 1960, Alderman Braddock assured the local population that, '. . . this is the end of the unemployment problem which has bedevilled Merseyside ever since 1919. It is quite clear that the

industrial development now starting, when it becomes an accomplished fact will provide employment for all the present unemployed in Liverpool and will provide very largely for the vast numbers of young people who will be leaving school in the next five years'.

In fact, by this time, the motor firms had already decided to concentrate recruitment among the employed, the married and the twenty-one to forty year olds. The small amount of skill needed for most motor industry jobs meant that firms could, in theory, recruit from the whole labour reserve. But personnel officers deliberately excluded large sections of the population. At Halewood, Goodman and Samuel (1966) recount how Ford targeted 'green labour' - shunning seamen, dockers and the unemployed. At Rootes, applicants were refused if they had had more than four jobs in the past five years, while single candidates had to have 'a better than average work record' (PRO 1964c). In general, the over forty-fives were considered only for skilled posts, while men under twenty were formally barred by both Rootes and Ford. These practices were a far cry from Alderman Braddock's beliefs, and a Ministry of Labour report (PRO 1964d) on BMC's problems confirmed the existence of a substantial expectation gap:

> There was a local attitude amongst the less well educated that the BMC had been sent to Bathgate to create a new prosperity and that the employers were obliged to engage any man who presented himself for a job. Letters have been frequently sent to the local MP by constituents seeking his intervention to compel BMC to give them work [emphasis in original].

This highly selective recruitment policy was reflected in the remuneration package. At all the new assembly plants, wages were deliberately pitched above local norms. In part this reflected national inter-industry differences, but it also deliberately encouraged settled workers to apply to migrant firms. As the left-wing academic and Ford critic Huw Beynon put it, the new workers were encouraged to come 'in search of Eldorado' (1984, p.101).

TABLE 8.1

DEVELOPMENT AREA PAY REGIMES, 1964

	Hourly Earnings			Weekly Earnings		Wage System
	Skilled	Semi-Skilled	Unskilled	Factory	Local Average	
Rootes (Linwood)	9/6	8/1	7/-	£18	£15	Hourly rate plus production bonus based on weekly output.
Pressed Steel (Linwood)	8/11	8/-	6/5	£19-20	£15	Hourly rate and monthly production bonus based on the extent to which a standard ratio of payroll costs to sales value of production is bettered
BMC (Bathgate)	9/-	8/3	6/3	Not known, but above local average.		Time rates
Vauxhall (Ellesmere Port)	9/-	8/3	6/3	Favourable		Time rate plus merit rating
Standard (Speke)	8/7	8/1	Na	Favourable		Time rate plus (piecework) incentive bonus
Ford (Halewood)	8/5	7/9	6/8	£19.10s.	£12-18	Time rates

Source: PRO (1964f)

In terms of this thesis, attention is focused on whether selective recruitment represented a departure from established practices. There is much to support this view. When engaging new workers in the 1950s and early 1960s, plants in the Midlands and South East were constrained by the available workforce and the level of in-migration. In Coventry alone, 44.5% of the population growth between 1951 and 1961 was dependant on migration (Lancaster & Mason 1986, p.76). But tight local labour markets persisted (Tolliday & Zeitlin 1985, p.204). In such circumstances, employers had to be less choosy (Turner 1963). But in the new plants, motor firms felt compelled to adopt new policies. This was due not only to

the scale of their projects, but the opportunities it afforded to management. As Beynon (1984, p.66) explains,

> The managers and foremen who went to the new plant (Halewood) were recruited from Dagenham. . . Many of the management team had been involved in conflicts with steward organisation at Dagenham, and were determined to prevent a similar situation developing at Halewood. The first Personnel Manager of the PTA plant remembers that "we went there with the idea of having a good plant; one with good labour relations. We wanted to get a trouble free plant, to get away from Dagenham and Dagenham ways."

Decisions taken here had important implications for future workplace relations. They also suggest that firms were experimenting with new and untried methods.

Workforce Profile

The evidence suggests that these policies created a new workforce profile. Initially, age distribution in the Development Area plants was highly skewed towards the target groups. In an analysis of Ford and Vauxhall's policy, Salt (1967) discovered that 44% of those employed in the first two years of operation (Halewood: end 1964; Ellesmere Port: end 1965) were aged between 21 and 29, and a further 36% between 30 and 39. Comparative figures for Rootes show that 85.6% of Scottish employees were between 21 and 44 years old. At Ford, only 1% of employees were aged over 50, while Vauxhall restricted the intake to 3%. This age bar effectively excluded 25% of Liverpool's unemployed from the new factories. At Rootes, the 14,290 applications meant that age limits were very strictly applied (Table 8.2). Here the recruiters were able to establish separate guidelines for each grade (PRO 1964c):

TABLE 8.2

AGE AND GRADE RECRUITMENT GUIDELINES: LINWOOD

Grade	Age Range
Assembly Workers	21-40
Machine Operators	21-45
Labourers	40-45
Skilled Workers	21-60

Source: PRO (1964c)

This age pattern was at odds with industry-wide trends. In 1964, over 63% of motor workers were aged thirty-five or over. During the same period, the not untypical Coventry based firm of Rover had 33% of its employees in the fifty-plus age bracket (Turner *et al* 1967, p.172).

Early experience at these plants suggested that selective recruitment did not create high labour turnover. The 1964 Ministry of Labour survey identified figures of 17% at Linwood, 13% at BMC, 10% at Vauxhall, 10% at Speke and 18% at Ford. The report concluded that 'turnover was not a problem', being below the average for the engineering industry and manufacturing as a whole. Against this must be placed Beynon's work, which recounts how Ford were forced to revise their hiring policy in the light of mass resignations and a labour shortage in the mid 1960s. This is more in character with evidence presented to the Expenditure Committee, where the motor firms described severe 'adjustment problems' in their regional plants.

The existence of a large pool of unemployed was one of the main reasons for the direction of the car firms to the Development Areas. Yet as Salt (1967) clearly shows, the Merseyside recruitment officers were successful in restricting access to jobs. At the time of the Halewood/Ellesmere Port survey, only 8.7% of the workforce had been jobless before joining the firms. This represented a mere 1,100 men, the majority of whom (75%) came from the short term unemployed. In Scotland, Rootes recruited only 25% of its workers from the dole queue, while BMC had the highest proportion at 40%.[1] As Salt (1967, p.58) argued:

> This shows the folly in appraising Development Area policy of equating jobs in the pipeline with the numbers out of work. It would be splendid if this did happen, but most unlikely because the unemployed tend to be less stable elements in the workforce and it is important for a new factory to develop stability among its employees at the earliest opportunity.

The question of previous industrial background was also crucial to the quality debate. The complaint from the motor firms was that that they were being forced to recruit 'green labour', untutored in flow production.[2] According to Sinnot,

[1] No comparative figure for Speke is available.
[2] See Turner *et al* (1967, p.144) for a discussion of the 'green labour' hypothesis.

Bathgate's general manager, the problem was an 'unadaptable workforce, content with modest earnings if increased pay required extra effort' (PRO 1964d). At Linwood, the problem was seen more in terms of build quality. Early Imps became notorious for faults. As one of the Ryton fitters recalled, 'We had a car come down from Scotland and was generally inspected by all and sundry at Ryton. You could actually sit in the thing and see the road beneath your feet, the gaps in the body panels were atrocious. You simply can't build cars like that' (Henshaw & Henshaw 1988, p. 57).

The Bathgate problems were the subject of a special investigation by the Board of Trade and Ministry of Labour. Sinnot had estimated that 50% of the plant's £2m losses (year ending July 1964) could be blamed on labour inefficiency. He argued that 71% of employees were from mining backgrounds, and that these workers were particularly troublesome. The Ministry of Labour did not agree. Although it noted that 'none of the men recruited in Scotland had previous motor vehicle manufacturing experience', it questioned the 71% claim. According to the Board of Trade, the allegations were 'patently untrue'. Keen to promote inward investment, the Scottish Office agreed. In a separate memorandum, the department added, 'We have no firm figures for how many men came from a mining background. We believe that the shale miner is the best type of employee, although our impression of coal miners is that they are adaptable and intelligent. Since 1963 3,000 coal miners have been absorbed by other industries in Scotland, and the BMC criticism is the only adverse reaction we know of' (PRO 1964d). The suggestion was that the BMC management shared complicity for their problems, and had helped to create an industrial relations environment in which conflict had become endemic.

Unfortunately, there was no corresponding investigation into Linwood's record. The surviving evidence suggests that Rootes was not displeased with labour quality, although their turnover figure of 17% was amongst the highest in the motor plant sample.

Better evidence is available for the Merseyside plants - particularly Halewood and Ellesmere Port. Table 8.3 summarises Salt's estimates of those Orders losing men

to the two plants. In total, 61% came from the manufacturing orders of the S.I.C., 32% from service orders, and 6% from construction. Salt estimated that 52% of these recruits came from orders declining in male employment (1959-63), and 48% from expanding sectors.

TABLE 8.3

INDUSTRIES LOSING MOST MEN TO FORD AND VAUXHALL

Industry	Number Lost	Sampling Error
Engineering and electrical goods	2,460	+/- 225
Transport	2,156	+/- 212
Chemicals	1,172	+/- 172
Food, drink, tobacco	892	+/- 160
Distribution	776	+/- 156
Construction	756	+/- 155

Source: Salt (1967, p.259)

Goodman and Samuel's (1966) more detailed study of Ford's workforce confirms this pattern. Almost half of the recruits were drawn from three industries; engineering and electrical, transport and communications and construction. Engineering and electrical was by far the greatest contributor, accounting for almost one quarter of new workers

The problem with this evidence is that it relates only to the first years of operation, and tells us nothing about labour market impact. However, it is clear that labour recruitment became progressively more difficult. Whereas Vauxhall's early recruits were hand-picked, 'To build up to 10,000 to 12,000 involved accepting virtually all comers for line assembly work'. Consequently, ' . . . it became apparent that a wider cross section of Merseyside labour was not becoming so readily acclimatised to the special characteristics of motor vehicle manufacturing' (Vauxhall Motors Ltd 1973, p.465). This tendency was also reflected by Ford, where the age bar was formally abandoned in 1965. But arguably, these problems were predictable. Salt (1967), Turner *et al* (1967) and Goodman and Samuel (1966) argue that labour recruitment was a simple function of the local industrial structure. It was up to management to devise a strategy to cope with the conditions. Initially, Rootes,

BMC Bathgate and Vauxhall traded-off labour inefficiency against lower wages. But the ideal solution would have been to combine effective recruitment with effective training.

The Training Effort

Historically, the motor companies did not believe much of a training programme was necessary. As early as 1925, Henry Ford had estimated that 75% of his workers could be made proficient in eight days, and as many as 43% of them required only one day's training. By the early 1960s, the British motor firms had abdicated responsibility for even basic instruction. The preference was for men who had been 'broken in' by other trades - not necessarily factory ones. Viewed in these terms, the Development Areas did not offer a new problem, but a new scale of problem.

All the Development Area plants relied on establishing a core of experienced supervisors and foremen to develop on-the-job training. This meant either importing personnel from established sites, or training new workers from scratch. In Scotland, there was a particular problem in attracting workers from the traditional manufacturing regions. BMC countered this with a preparatory supervisor training programme and industrial relations course for shop stewards. Rootes appeared to have a much more lax approach, with little (if any) management training. It was only later that a two week course was introduced for line workers (PRO 1964g).

TABLE 8.4

EMPLOYEE TRAINING SCHEMES IN DEVELOPMENT AREA PLANTS

Plant	Management/Supervisory Programme	Line Workers Programme
BMC Bathgate	Supervisory training programme completed by 228 foreman Industrial relations course for shop stewards	Formal induction procedure Majority of subsequent training 'on the job'
Linwood	No formal supervisory training	3 hours basic induction From 1964, 2-4 week training school for semi-skilled
Ellesmere Port	17 week course for supervisors	Brief induction course Majority of training 'on the job'
Halewood	Pilot plant established to train supervisors and managers Trainee foreman scheme introduced in advance of production	'Good' induction procedure
Speke	No courses indicated	No induction course Training entirely 'on the job'

Source: PRO (1964g).

Of the Merseyside plants, the American-owned subsidiaries had the more comprehensive programmes. At Vauxhall, the company's hitherto impressive labour performance was mirrored by a seventeen week supervisory course. Ford went one stage further, establishing a pilot assembly line which acted as a training ground for the first wave of recruits. However, this policy was soon abandoned. Conversely, Standard Triumph relied almost entirely on on-the-job training, while a system of Coventry based supervisory courses were phased in during 1964.

From the employers' perspective, any training constituted a special effort. Induction and supervision courses were not unknown, but their systematic application in a new location was. With the notable exception of BMC, all the firms thought the effort worthwhile. By 1964, Ford, Vauxhall, Standard and Rootes had told the Ministry of Labour that their new workers were well suited to the plants. It was only in the medium term, with the failure of new working practices, that labour became an issue.

Foreshadowing later complaints, Bathgate's problems were articulated in terms of attitude rather than aptitude. According to management, the workers did not lack the skill, but rather the drive and willingness to 'complete an honest day's work'. These opinions earned widespread publicity in both the local and national press, so much so, that BMC were forced to order plant manager Sinnot to stay silent.

Bathgate's labour profile did not differ massively from the other plants. Recruitment was from a slightly larger catchment area, and more workers were drawn from the extractive sector. But the crucial element was managerial. BMC quickly allowed a culture to develop which alienated both workers and unions. While industrial relations were poisoned by a series of controversial press briefings, the original labour contracts were arbitrarily discarded by managers. Standards of supervision were universally condemned, and the Ministry of Labour thought the company 'too willing to yield to union demands'. Diak's (PRO 1964h) comments in September 1964 made the point succinctly:

> It was inevitable that difficulties should arise because of the lack of familiarity with a type of production of which there is little tradition in Scotland, and also because the labour build-up involved in a project of this kind tends to limit the amount of training that can be undertaken. Even so, other firms like Honeywell Controls of Airdrie and National Cash Registers of Dundee have introduced mass production systems into Scotland with conspicuous success.

There was little sympathy for Bathgate amongst other manufacturers. Ford executives actually told Diak that BMC had brought the problems on themselves. Certainly BMC were aware of their short-comings, and even Sinnot admitted that the company had been the victim of poor preparation. It is therefore surprising to find Vauxhall, Ford, Standard and Rootes later repeating the Bathgate pattern. According to written and oral evidence, there was a deterioration of work effort in all Development Area plants during the late 1960s. Just like BMC, the companies blamed employee background and militancy.

To recap, the evidence suggests that selective recruitment created an exceptionally young labour force. However, the employment histories of recruits do not substantiate claims of widespread inexperience and unsuitability when compared to traditional regions. While patterns of previous employment were different,

workers in the West Midlands and South East were just as likely to have had limited experience of factory production. What was different was the scale of the problem.

Employers initially declared themselves satisfied with the standard of labour in the new plants. The move to less selective forms of recruitment allowed them to blame worker backgrounds for subsequent performance problems. However, all the companies provided inadequate training regimes. While firms recognised a skills deficit in the North West and Scotland, they persisted with on-the job instruction. This suggests some shared responsibility for labour problems.

There were also separate issues concerning new management policies in the Development Areas. According to the firms, the deterioration in labour quality coincided with the change in recruitment strategy. But this does not prove a causal connection. As will become clear, a simple focus on worker origin is inadequate. The study must go beyond aggregates to consider the nature of workplace relations and the actions of managers during the crucial foundation stages. This is evident from an analysis of industrial stoppages.

§8.3 The Labour Function (2) Strikes

This section poses three important questions:

- Were Development Areas historically more strike prone than areas in the South and Midlands?
- Did the Development Area motor plants *prove* more strike prone than existing plants?
- What costs (if any) did regional variations in strike activity impose on the motor manufacturers?

Information about strikes in the UK is collated by the Department of Employment on a voluntary basis through local Unemployment Benefit Offices, returns from nationalised industries, public bodies and large firms, and reports in the national and local press (Dickerson 1992, p.49). There are obvious problems in ensuring complete coverage, and stoppages involving fewer then ten workers and lasting

less than one day are normally excluded. Industry specific evidence suggests that under-recording is a very serious problem (Durcan *et al* 1983, p. 5), with Turner *et al* (1967) and Kelly and Nicholson (1980) noting substantial shortfalls in reported car strikes. On a wider scale, Brown (1981) has suggested that 38% of strikes and 4% of working days lost in manufacturing evaded government statisticians in the not untypical year of 1976-77.

Perhaps of greater importance than completeness is the consistency of the data over time. This is affected by administrative practices and changes in the Minimum List Headings. In the former case, errors are very difficult to identify. It is usually assumed that accuracy has been constant, providing an important caveat for time series analysis (Dickerson 1992, p. 53). By contrast, difficulties in industrial classification are largely surmountable. Problems arise because the 1948 Standard Industrial Classifications have been revised decenially. The most important revision for motor vehicles occurred in 1958, when cycles was excluded while the manufacture of parts and accessories was included. A further revision in 1968 led to the reclassification of wheeled tractor manufacture. Strictly speaking, these revisions mean that comparisons based on the 1948, 1958 and 1968 series are invalid, but, in practice, the manufacture of cars and commercial vehicles has always dominated the statistics. This means that broad comparisons are possible, but undue weight should not be attached to minor variations over time (Durcan *et al* 1983, p. 313).

Regional strike statistics were first published in 1957. While these include the workers involved and working days lost during a given year, they exclude the number of strikes. Fortunately this is not a major handicap, and the Department's annual estimates can be supplemented by information in the *Industrial Stoppages Data*. For earlier years, work by Durcan *et al* (1983) provides a limited database. These statistics suggest a two part analysis:

Period #1 1945-60 - the historical evidence of regional differences in strike liability using the established literature.

Period #2 1959-82 - focusing on the early performance of the Development Area plants using published and unpublished official data, and statistics from the *Industrial Stoppages Data.*

In both periods, several measures can be employed. Broadly speaking, these conform to the three basic indices of stoppage activity. These are represented in the identity:

$$\text{Days Lost} \equiv \text{Strike Size} \times \text{Duration}$$

Where 'Strike Size' is the average number of workers involved in a dispute and 'Duration' is measured in days. The total number of 'Days Lost' is then obtained by summing over all disputes. The relationship can be applied at any level of aggregation, to any unit of observation and for any period of interest. Each component reflects a different dimension of conflict, although the number of strikes is most frequently used by economists. This study will focus on the Number of Days Lost. This has been championed as the best indicator of the economic effects of stoppages.[3] This is because, while the number of strikes is under-recorded due to size criteria, the number of days lost in short strikes represents only a tiny fraction of total working days lost. The measure therefore provides a much better measure of conflict. However, Knowles (1952, p. 267) has remarked that using the number of working days lost as a proxy for economic effects was 'not unlike estimating air raid damage by reference to the bomb tonnage dropped, irrespective of target or type of bomb'. In fact, the days lost series can seriously over or underestimate economic damage depending on the level of stocks and the potential market for 'lost production'. As will be shown , the potential market is of crucial importance for motor industry data.

Period #1 - 1945-60

The pertinent question here is whether Development Area destinations were particularly strike prone before intervention in the 1960s. Since regional strike data has only been published since 1957, this question is particularly problematic.

[3] See the technical note attached to the Department of Employment's annual summary of stoppages in the *Employment Gazette.*

Existing studies of labour relations in the motor industry have focused on inter-firm comparisons (Turner *et al* 1967, Bescoby & Turner 1961), while both Woo (1986) and Smith *et al* (1978) begin their analyses in the mid 1960s. The notable exception is Durcan *et al* (1983), who provides an analysis of regional strike trends from 1946-1973.

Durcan's *et al*'s analysis is uncharacteristically sketchy. Taking three sub-periods (1946-62, 1963-68, and 1969-73), the study made the following observations:

> Overall the West Midlands dominated the major strikes league with 48% of the total. Runners-up included the South East with 21%, the North West with 12% and Scotland with 12%. Other regions accounted for 9% and strikes affecting more that one region amounted to less than 3% of the total. Analysis by sub-periods disclosed a consistent decline in the West Midlands share and a consistent rise in the North West. Scotland's share rose in the mid-1960s and then fell. The South East's share fell and then rose. In terms of actual number of stoppages, comparison of the last two sub-periods disclosed that major strikes in Scotland rose by 13%, in the West Midlands by 49%, in the South East by 135% and in the North West by 400% (1983, p.322).

Durcan *et al* offered no real explanation for these trends, merely noting the changing regional distribution of motor industry employment and speculating that it 'had made the areas where motor vehicle manufacture had previously concentrated more susceptible to adverse movements in employment'.

The standard of Durcan *et al*'s analysis was related to the quality of available information. Despite being granted full access to the Department of Employment's records, the regional series only related to stoppage frequency. The investigators were also forced to compile their own industry figures since the cross-tabulation of regional and SIC headings did not begin until 1957. However, industry-specific evidence is not essential in this part of our study. This is because we are investigating strike-proneness in the wider regional environment. In this context, details of early postwar Development Area motor disputes are largely irrelevant, since car building remained concentrated in the West Midlands and South East. Instead, we can examine evidence from all manufacturing industry, and this can be used to assess historic patterns and trends.

TABLE 8.5

MAJOR STRIKE FREQUENCY, ALL INDUSTIES, 1946-59[1]

	1946-52		1953-59	
	Strikes	Strikes per 100,000 Workers [2]	Strikes	Strikes per 100,000 Workers
South East	74	0.98	52	0.69
East Anglia	0		0	
South West	3	0.28	4	0.38
West Midlands	22	1.05	32	1.53
Yorkshire & Humberside and East Midlands	11	0.34	9	0.28
North West	27	0.91	24	0.81
North	9	0.71	9	0.71
Wales	15	1.58	9	0.95
Scotland	37	1.73	47	2.19
Great Britain [3]	197	0.93	186	0.88
Standard Deviation	21.19	0.49	17.49	0.59
Coefficient of Variation	85.63	51.28	75.23	62.82

Notes:

[1] Major strike activity is defined as stoppages which involve the loss of 5,000 or more working days. Does not include coal mining.

[2] Based on the average number of employees at each mid-year, 1951-59.

[3] Does not include national strikes or strikes affecting more than one region.

Source:

Durcan *et al* (1983, tables 2.18 and 3.18).

Department of Employment and Productivity (1971, table 131).

Table 8.5 provides the best available evidence for regional strike frequency from 1946-59. Not surprisingly, the South East dominates the data, comprising 37.6% of all stoppages in 1946-52, and 28% of major strikes from 1953-59. This reflects the higher concentration of industry within the South East. To compensate for this, a second column has been added to relate strike activity to industrial distribution. This is moderately successful for both periods, reducing the coefficient of variation by 34 and 12 points respectively. Unfortunately the exercise does not address variations in regional industrial make-up. In particular, the concentration of traditionally militant industries in 'outer Britain' introduces a structural element, making inter-regional comparisons difficult. The usual practice

is to isolate the structural effect by comparing stoppage incidence in a given industry at the local level with national averages.[4] However, the available evidence makes this impossible. Nevertheless some useful observations can be made.

The first point is that from 1946-52, the stoppages recorded in table 8.5 represented 90% of all reported strikes. In other words, industrial activity was localised. In terms of strikes per 100,000 workers, Scotland's figure was nearly twice the national average. Another Development Area - Wales - closely followed, but the North West nearly matched the national mean. The two traditional car making regions in the Midlands and South East were third and fourth placed respectively, recording figures of 39% and 43% below the worst performing region.

In the second sub-period, it is possible to draw some conclusions about whether particular regions were becoming more or less strike prone. In absolute terms, the South East still had the highest number of stoppages, followed by Scotland and the West Midlands. In terms of strikes per 100,000 workers, both Scotland and the West Midlands suffered considerable increases. By contrast, there was a marked decline in the South East, which dropped to sixth in the regional rankings. In general, relative positions did change, but not markedly (the rank correlation coefficient was 0.84). But whereas the most militant area in 1946-52 suffered five times greater disruption than the East Midlands/Yorkshire & Humberside divisions, in 1953-59 the corresponding ratio approached 800%. This was mirrored in increases in both the standard deviation and coefficient of variation. In summary, the pattern of strike activity showed reasonable consistency, although the range and standard deviation increased. The West Midlands suffered increasing industrial unrest, while Scotland remained the most militant region.

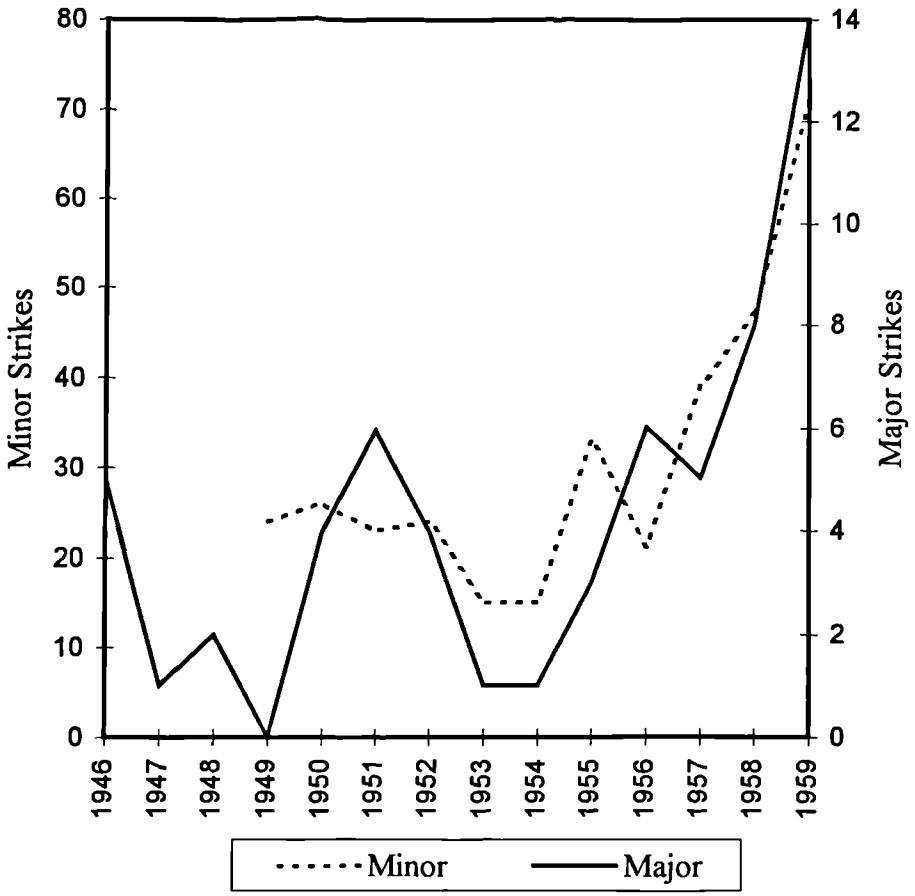
Increasing militancy in the West Midlands can be partly be explained by rising unrest in the motor vehicle industry (Figure 8.1). Durcan *et al*'s (1983, pp. 312-51) study revealed increases in both major and minor strike activity. Their subsequent analysis mirrored the findings of Turner *et al* (1967), highlighting irregularity of employment, the payment structure and frustrated wage

[4] For example, see Smith *et al* (1978).

expectations as prominent causes. However, the frequency statistics suggest that for most South East or Midlands based firms, a move to Scotland still represented a step into the unknown. This fact was keenly appreciated by the Scottish Council.

FIGURE 8.1

STRIKE FREQUENCY, MOTOR VEHICLES, 1946-59

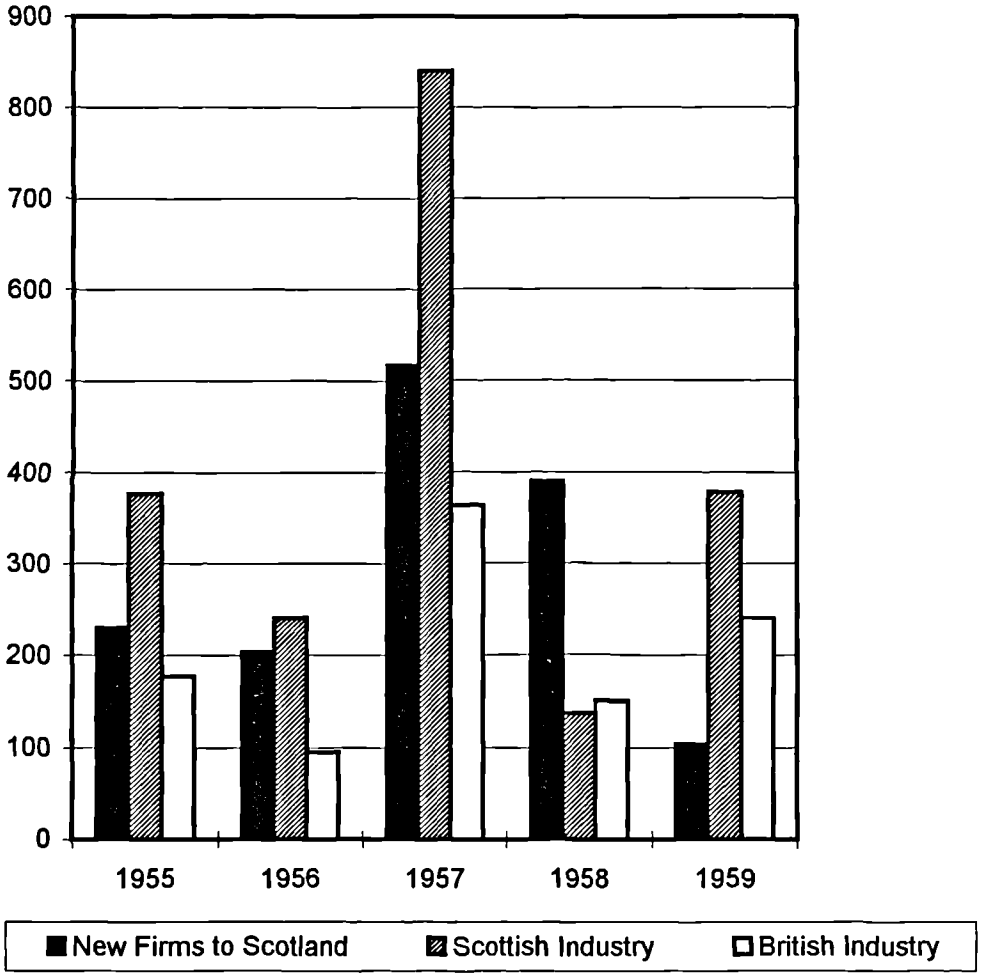


Source: Durcan *et al* (1983, tables 10.2, 10.3)

In their approach to the motor manufacturers in 1959, the Council tried to allay strike fears by providing an analysis of stoppages in both Britain and Scotland. The report highlighted the difference between new industry and traditional manufacturing, and suggested that the record of new firms was better than might be expected. Much was made of the position in 1959, when the number of day lost in newly settled firms was below both the Scottish and British averages (Figure 8.2). But this could not disguise the fact that, in terms of aggregate frequency and working days lost, the Scottish division remained the most militant part of Britain.

FIGURE 8.2

DAYS LOST PER 1,000 WORKERS, SCOTTISH AND BRITISH INDUSTRY, 1955-1959



Source: SRO (1964)

This section began by posing the question 'Were Development Areas historically more strike prone than areas in the South and Midlands?' The available evidence is inconclusive. While Scotland seems to have endured the greatest strike frequency, the North West was consistently below the West Midlands and national averages. By contrast the South East recorded the lowest average number of strikes per 100,000 workers in the subset of 1960 motor manufacturing regions (South East, West Midlands, North West and Scotland). By itself, the evidence suggests that the North West may have been the least militant Development Area location. It

also implies that any move from the South East represented a major gamble for existing manufacturing enterprises. However, it is unclear whether this fact was appreciated by the motor firms in the prelude to decentralisation. Site surveys concentrated on physical attributes and the proximity to suppliers, rather than labour attitude. While the availability of key workers remained a binding constraint, firms appeared to regard relocation as an opportunity to embrace new forms of workplace control. This suggests that management incorrectly assessed the strike proneness of traditional labour systems in the South East and Midlands, while underestimating the potential for conflict under a new regime.

Period #2 1959-1982

Several influential studies have argued that the postwar British motor industry was highly strike prone, both in comparison with overseas based car makers, and with domestic manufacturing as a whole (Church 1994, p.65). For example, Jones and Prais (1978) suggest that the percentage of British man days lost in vehicle manufacturing in the 1960s and early 1970s was half as high as in the United States, and ten times greater than in Germany. But while industrial stoppages have attracted interest on both national and international levels, the regional dimension has been largely ignored. Forman-Peck *et al* (1995) are typical in their approach, suggesting that 'all the new plants in "outer Britain" suffered from poor, if not poorer industrial relations than the original sites'. Crucially, however, they provide no corroborating evidence.

This section addresses the second question posed in §8.3, and concentrates on the strike record in Development Area plants. Three measures are available for analysis: days lost, workers involved, and strike duration. In the first two cases, regional totals have been adjusted by providing 'per employee' measures. However, strike duration has been proxied by calculating the number of days lost per striking worker. This latter measure is not an ideal surrogate, but has the advantage of following a clearly established methodology (Dickerson 1992, p.61).

Our first point of reference is the number of days lost per employee in different regions. Table 8.6 presents annual data for both the traditional areas of motor manufacturing (the South East and Midlands) and the regional policy destinations.

TABLE 8.6

DAYS LOST PER WORKER: TRADITIONAL MOTOR MANUFACTURING AREAS VERSUS NEW LOCATIONS[1]

	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
South East[2]	0.61	1.15	0.90	1.09	0.38	0.28	0.45	0.35	0.82	0.80	2.29	1.77
Midlands[3]	0.74	1.05	0.26	0.67	0.56	1.00	1.98	0.86	1.44	1.42	1.47	2.06
North West	0.24	0.14	0.24	1.13	0.16	0.12	0.39	0.48	0.21	1.35	11.3	2.81
Scotland	0.07	0.63	0.32	1.92	0.57	0.56	1.31	3.07	0.99	6.65	4.10	5.33

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
South East	8.52	0.83	4.35	3.17	1.65	1.73	1.80	1.83	1.89	1.94	2.03	2.13
Midlands	4.38	3.49	3.20	2.95	2.51	1.83	1.89	1.94	2.04	2.06	2.15	2.22
North West	9.04	2.85	7.26	5.94	1.03	2.63	2.77	2.92	3.08	3.19	3.37	3.56
Scotland	0.99	15.0	5.25	9.53	1.82	3.42	3.62	3.79	4.00	4.12	4.33	4.55

Notes:

[1] 1960-1965: Vehicles; 1966-79: MLH 381, Motor Vehicle Manufacturing; 1979-1982: SIC 351 Motor Vehicles and their Components.

[2] London & South Eastern, Eastern & Southern and East Anglia.

[3] East Midlands, West Midlands, Yorkshire & Humberside.

Sources:

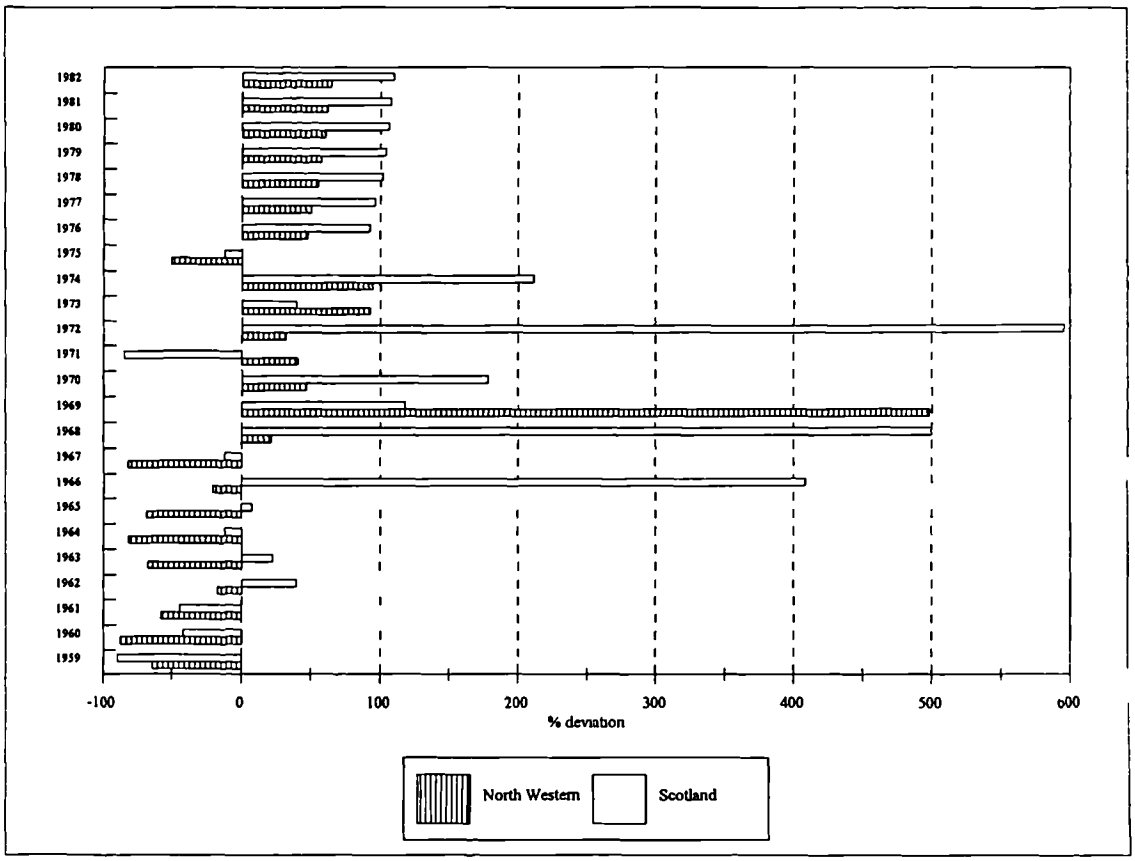
Ministry of Labour Gazette (various years), Employment Department (1991), Durcan *et al* (1983, p. 328); CSO *Business Monitor* (various years).

These figures demonstrate the growing tide of industrial unrest in all regions from the mid 1960s to the late 1970s. They also indicate a noticeable regional pattern, with Scotland and the North West starting the period with a much lower incidence of days lost, then spectacularly outpacing the established regions, before finally settling to a level which was broadly double the South East and Midlands average. These patterns are even more noticeable in Figure 8.3 which charts the percentage

deviation in days lost in Development Areas compared with South East and Midlands norms.

FIGURE 8.3

DAYS LOST PER EMPLOYEE: PERCENTAGE DEVIATION FROM TRADITIONAL MANUFACTURING REGIONS



Source: As in Table 8.6

The inter-regional differences in days lost per worker reflect trends already noted in Table 8.5. Scotland's status as Britain's most strike prone region is clearly evident. The North West also emerges as a relatively benign area for industrial relocation, having a lower incidence of day lost per worker than Scotland, while keeping well above South East and Midlands levels. In short, the aggregate data

seems to suggest that relocation did indeed increase the number of days lost per employee, and that by the late 1970s, time lost in the North West and Scotland was between 50% and 110% above levels in core manufacturing regions.

If we examine trends in the number of workers involved in industrial disputes, a different pattern emerges (Table 8.7). Apart from anomalous findings for Scotland in the mid to late 1960s (see below), it seems that the number of workers involved in disputes was lower than expected in the Development Areas. But because of interpretational and methodological difficulties, only limited inferences can be drawn from this evidence.[5] The main lesson appears to be that fewer workers participated in industrial disputes in the North West and Scotland, although the number of days lost per employee was consistently higher in these locations. This suggests that *either* the duration of stoppages was longer *or* the frequency of strikes was greater in the new plants.

[5] See Dickerson (1992) for a fuller discussion of these problems.

TABLE 8.7

WORKERS INVOLVED PER EMPLOYEE: TRADITIONAL MOTOR MANUFACTURING AREAS VERSUS NEW LOCATIONS[1]

	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
South East[2]	0.16	0.57	0.27	0.74	0.17	0.14	0.17	0.13	0.25	0.23	0.38	0.31
Midlands[3]	0.32	0.29	0.14	1.25	0.26	0.26	0.44	0.37	0.60	0.49	0.45	0.48
North West	0.06	0.07	0.12	0.96	0.06	0.09	0.18	0.06	0.18	0.33	0.77	0.63
Scotland	0.07	0.05	0.08	1.47	0.43	0.43	0.57	0.59	0.83	2.17	2.33	2.13

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
South East	0.32	0.15	0.93	0.29	0.15	0.32	0.32	0.31	0.31	0.29	0.29	0.30
Midlands	0.94	0.72	0.58	0.33	0.57	0.50	0.51	0.52	0.54	0.50	0.52	0.53
North West	0.92	0.75	1.85	0.49	0.95	0.50	0.52	0.55	0.58	0.50	0.58	0.61
Scotland	0.53	0.85	1.03	0.21	0.39	0.83	0.88	0.93	0.98	0.95	0.98	1.01

Notes:

[1] 1960-1965: Vehicles; 1966-79: MLH 381: Motor Vehicle Manufacturing; 1979-1982: SIC 351 Motor Vehicles and their Components.

[2] London & South Eastern, Eastern & Southern and East Anglia.

[3] East Midlands, West Midlands, Yorkshire & Humberside.

Sources:

Ministry of Labour Gazette (various years), Employment Department (1991), Durcan *et al* (1983, p.328); CSO *Business Monitor* (various years).

Table 8.8 provides a proxy for strike duration by calculating the number of days lost per striking worker in each of the study areas. It is immediately clear that strikers in decentralised plants tended to spend far less time on strike per year than their counterparts in the South East and Midlands. The inescapable conclusion is that strikes must have been *more* frequent *and* shorter in Scotland and the North West, thereby accounting for the higher incidence of days lost per employee in the new regions.

TABLE 8.8

DAYS LOST PER STRIKING WORKER: TRADITIONAL MOTOR MANUFACTURING AREAS VERSUS NEW LOCATIONS[1]

	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
South East[2]	3.79	2.02	3.32	1.47	2.19	2.09	2.70	2.63	3.29	3.52	5.98	5.62
Midlands[3]	2.33	3.63	1.84	1.34	2.18	3.83	4.55	2.35	2.40	2.90	3.31	4.31
North West	4.24	1.97	2.08	1.18	2.50	1.44	2.12	7.37	1.19	4.10	14.57	4.48
Scotland	1.07	12.63	4.29	17.31	1.33	1.30	2.30	5.20	1.20	3.06	1.76	2.50

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
South East	26.26	5.66	4.70	4.87	5.24	6.09	11.29	25.51	4.46	3.75	3.68	1.05
Midlands	4.67	4.84	5.52	5.77	6.89	4.21	8.06	4.67	8.41	5.39	3.79	3.84
North West	9.86	3.79	3.92	8.05	1.95	2.58	9.75	17.72	14.71	1.72	2.96	3.90
Scotland	1.88	17.59	5.09	6.44	8.41	3.42	5.48	14.58	5.24	4.17	4.44	9.12

Notes:

[1] 1960-1965: Vehicles; 1966-79: MLH 381 Motor Vehicle Manufacturing; 1979-1982: SIC 351 Motor Vehicles and their Components.

[2] London & South Eastern, Eastern & Southern and East Anglia.

[3] East Midlands, West Midlands, Yorkshire & Humberside.

Sources:

Ministry of Labour Gazette (various years), Employment Department (1991), Durcan *et al* (1983, p.328), CSO *Business Monitor* (various years).

In summary, the regional data for the period from 1959-1982 indicate the following trends:

- a tendency for working days lost per employee to be higher in the new manufacturing regions
- a tendency for the number of workers involved in stoppages to be lower in the new manufacturing regions
- a tendency for strikes to be shorter, but more frequent in the new manufacturing regions

In addition, it seems that patterns did change over time. In particular, there appears to have been a settling-in period in all the new plants, lasting from the mid 1960s to the early 1970s. During these years, the number of days lost was much higher than in the traditional areas, with a number of regional peaks in stoppage activity. However, after 1974, the number of peaks diminished, and strike activity

in 'new' areas fell to a level which was broadly double the figure in core manufacturing areas. This evidence corresponds to findings by Woo (1986) and Townroe (1979), who identified short to medium term labour relations problems for migrant companies in the 1960s and early 1970s.

§8.4 The Costs of Industrial Action

Having examined the pattern and nature of disputes, attention now focuses on the economic costs caused by greater disruption in the new plants. Conceptually, these costs should be measured as the sum of the producer and consumer surpluses lost as a result of labour unrest. But for the purposes of this study, we are simply concerned with the costs borne by individual firms. As we have seen in Chapter 3, the motor industry literature is dominated by this question. Debate usually centres on two issues: lost output and the increased costs associated with delays in the production process.

On the macroeconomic level, the available evidence on the cost of lost output is limited. Whittingham and Towers (1971) calculate the total loss to be only 0.2% of GNP for 1970, while Turner (1969) puts the figure at less than 0.1%. For individual firms, the effect of lost output will depend on the availability of stocks and the level of demand. This means that strikes are not necessarily damaging. For example, Turner *et al* (1967) have argued that motor industry bosses provoked disputes in the 1950s and 1960s in an effort to avoid redundancy claims.[6] But even so, Department of Employment statistics show that industrial disputes accounted for half of lost output in the late 1960s (HMSO 1975b, p.74). Moreover, Foreman-Peck *et al* (1995, p.182) argue that strikes on new model lines remained extremely damaging throughout the 1970s, because the number of vehicles lost was high relative to the wages saved.

On the regional level, the effect of lost output is difficult to assess. For firms producing successful models or introducing new products, stoppages could be critical. But for less successful models, interruptions in output afforded smaller

[6] Turner *et al*'s arguments are also echoed by Bhaskar's (1975, p 5.59) discussion of the 1975 door hangers' dispute.

penalties. The Chrysler example is instructive. Linwood's initial failure was linked to the fortunes of the Hillman Imp. Throughout its production run, the car failed to meet sales forecasts and output remained below planned capacity.[7] In the early 1970s, the Imp was replaced by the Hunter (Arrow), and by 1971, Linwood's production was running at over 2,000 cars per week. Chrysler estimated that internal disputes caused the loss of some 212,000 vehicles over the next four years. But as Young and Hood (1977, pp. 244-46) maintain, the real impact of these losses depended on domestic and overseas conditions:

> There is no doubt that the UK market alone could not have borne these additional production volumes. The most that could have been hoped for, assuming that Chrysler had been able to maintain say, a 10% market share, would have been 70,000 extra units over the four year period. It is doubtful whether any additional sales would have been made in Europe . . .This leaves the US market. Their insecurity of supply was undoubtedly one factor leading to the replacement of the Avenger by the Mitsubishi Colt. While mere speculation, a decision in favour of the Avenger could have meant additional sales of 120,000 units to the Unites States, at best, therefore, about 90% of output lost because of strikes might have been sold; at worst about 30%. The latter would have scarcely have increased throughput and revenue enough to prevent recourse to government funds, but the latter almost certainly would have, with capacity utilisation being increased from under 70 to between 80 and 85% on average over the next four years.

Given the increased international competition following the Kennedy Round and Britain's entry into the EEC, Young and Hood's assessment may be generous. However, it does illustrate the difficulty in creating a plausible counterfactual. Lost output does not necessarily mean lost sales, and account must be taken of demand conditions. Moreover, company estimates of vehicles lost remain highly suspect. In the year ended September 1973, BL produced 1,161,000 vehicles, the Expenditure Committee reported that, if the company's vehicles lost figures were added to the actual production figures, total capacity would have been 1,400,000 (HMSO 1975b, p.90). As Bhaskar (1975, p. 120) notes, 'It is inconceivable that given no industrial relations problems and perfect working of all machinery, that BL could produce that number of vehicles'.

---

[7] See Henshaw & Henshaw (1988, p. 43) for detailed Linwood sales and production figures.

Similar difficulties are illustrated by the experience of BL's Liverpool complex. The Speke #2 extension was originally used to assemble Triumph Toledos, the TR6 and body panels for the Triumph Stag. In 1974, the plant became responsible for production of the new TR7.[8] The TR7 was the first sports car to be completely assembled at Merseyside, and the only complete car in Liverpool's care. It formed the centrepiece of BL's ambitious North American sales programme.

The car attracted attention for all the wrong reasons. Its wedge-shaped profile challenged conventional ideas about sports car design, but its reliability and safety were woeful. The TR7 obtained by *Motoring Which* contained 24 defects when purchased, including several missing parts.[9] During a 10,000 mile test, the car developed trouble with vibration, noise, stalling, the exhaust system, transmission, propshaft, front and rear suspension, leaks, paint, bodywork rattles and electrics. *Motor* criticised the Triumph's noisy and undependable engine, its unreliable transmission, vibration, leaking door seals, and 'the stupid little things that keep falling off or breaking'. The bad publicity culminated with the American Centre of Auto Safety's 1977 censure of BL for producing dangerous vehicles. According to the CAS, the TR7's failure rate was 'excessively high' and American consumers were being used as little more than 'guinea pigs'.

Although 76,000 TR7's were produced in Liverpool from 1974-77, this was well below the break-even figure (Austin Rover 1985). The Liverpool factory was far too big to be profitable making only one model - unless that model could sell in sufficient quantity (Langworth & Robson 1979, p.280). While BL pointed to labour relations problems at Speke, it was clear to many observers that lost output did not equate with lost sales. The heart of the problem was an inability to produce cars of sufficient quality, and this was linked to the design, engineering and production failures which pervaded BL. The decision to close Speke *was* linked to poor industrial relations, but it also reflected the 'product led failure' identified by Williams *et al* (1986).

---

[8] A discussion of the TR7's development can be found in Langworth & Robson (1979) pp. 271-85.

[9] This discussion relies on Whisler (1995, pp. 246-251).

Bathgate's lost output can be regarded in a similar manner. The Scottish plant specialised in assembling trucks and tractors for the commercial vehicle sector. Although Barber told the Expenditure Committee in 1975 that the division was performing well (Barber 1975, p.139), an objective assessment by Bhaskar (1975, p.129) identified major weaknesses. Bhaskar noted that Leyland's pre-BL strength lay in commercial vehicles, but that the company had been starved of funds and overtaken by both Vauxhall and Chrysler. Ford had also established a strong presence, and smaller firms were threatening in the articulated vehicles sector. Bhaskar's analysis proved correct, and BL saw its UK market share dwindle from around 20% in 1970 to 12.8% in 1982 (Bhaskar 1983, p. 156). This resulted in substantial surplus capacity, and ultimately led to Bathgate's closure. Again, there is a strong suggestion that lost output might not have been very easy for the company to dispose of.

Lost output is more important for plants operating in core markets with good selling products. While Halewood fits this profile, Ellesmere Port proved slightly less successful. But both plants produced important models in a growing international marketplace.

Halewood has traditionally focused on right hand drive (RHD) models for the UK and the Far East. Halewood's products were unusually successful, with the Escort never out of the top ten best sellers. It remains speculation as to whether the firm could have sold the output lost to industrial stoppages, but the UK market has always been able to absorb the Liverpool plant's output. Moreover, during the 1970s and early 1980s, Ford's models were so successful that the company sold more cars in the UK than it produced (Bhaskar 1983, p.206). During these years, Escorts were imported from Saarlouis in Germany, reflecting the European focus of Ford's production strategy

TABLE 8.9

MODEL HISTORY, HALEWOOD/ELLESMERE PORT, 1963-92

Halewood		Ellesmere Port	
1963-65	105E/123E Anglia	1964-66	HA Viva
1961-64	Classsic	1966-70	HB Viva
1961-64	307E light van	1970-79	HC Viva/Firenza Coupe
1962-75	Cortina	1975-84	Chevette
1962-76	Capri	1981-84	Astra Mark I
1963-70	Corsair	1984-90	Astra Mark II
1963-70	Zephyr	1986-90	Belmont/Astramax/Astravan/ Kadett Combo Mark I
1963-70	Zodiac	1990	Astra, Belmont, Astra Van Mark III
1968-74	Escort Mark I		
1975-80	Escort Mark II		
1980-90	Escort Mark III		
1983-90	Orion		
1990-92	Escort/Orion Mark IV		
1992-	Escort/Orion Mark IV Update		

Source: Pike (1994, p. 211).

Ellesmere Port also concentrated on the production of RHD vehicles. The plant began as a fully integrated manufacturing site, specialising in small family cars such as the Viva and Chevette. With GM's internationalisation programme in the 1970s, plant strategy switched to consolidating existing functions while supplying components to General Motors Europe. However, Vauxhall experienced sales problems throughout the late 1960s and 1970s, with market share falling from 12.7% in 1967, to 6.9% in 1978 (Church 1994, p. 79). In these circumstances it is questionable whether lost output could have found a market. But the more important consequence of lost production was that new investments were steered away from Britain.[10] As a consequence of sourcing decisions, the local content of Vauxhall's cars fell from 98% in 1973 to 22% by 1983 (Church 1994, p.110). In

[10] Jürgens *et al* (1993, p.272) note in their discussion of the British 'Hartmoor' plant that: 'Regardless of the reasons for not attaining the production target, the fact that they did not attain it placed British plants - local management as well as unions - in a difficult position when they brought their demands for an increased production volume, and thus increased employment for the British sites. As long as they could not show that they could regularly keep to their daily production quota, they could hardly criticise the circumstance that the production volume allocated by European headquarters to the British plants was considerably below the sales volume for the corresponding vehicle in the British market'.

part, this reflected GM's attempts to yield scale economies from international patterns of specialisation, but it also indicated the premium which global production strategies have placed on continuous supply.

This leads our discussion to consider the separate question of delays in production. The issues here are quite straightforward. Both 'fordist' and 'flexible' production systems are generally intolerant of disruptions to the product flow. This is because both rely on the continuous movement of products throughout the plant. Williams *et al* (1994, pp. 25-26) explain the concepts involved:

> In repetitive manufacturing, goods are fabricated or assembled as they pass through a series of work stations each of which consists of one or more machines and/or one or more workers. Car and component factories are a loose system of interconnected work stations which are either adjacent to, or connected by, handling system which have slides, roller beds or powered conveyors. The work of the stations can be scheduled on a push or pull basis. . . in either case the system is fundamentally driven by the build requirement for regular delivery of one finished unit at a set time interval: every major production stage which produces assemblies for the finished product must operate on this delivery cycle . . . As a manufacturing activity, car making is distinguished by an unusually acute difficulty with sustaining continuous operation and flow between the processes.

Since labour and capital stand idle during disputes, discontinuities arrest production and involve substantial costs. For these reasons Woollard (1954, p.70) concluded that 'continuity is the secret of production'. The Development Area plants' proclivity for small scale frequent stoppages represented the antithesis of Wollard's ideal. Hence Beynon's memorable account of the attempts at Halewood to the keep the line moving. According to the motor manufacturers, disputes impacted on efficiency and profitability. The difficulty arises in trying to quantify the losses. None went as a far as BL, who included unaudited and unsubstantiated estimates of 'manpower efficiency losses' in their evidence to parliament. These suggested that extra training and stoppages cost the firm an additional £1.4 million pa in both Bathgate and Liverpool (DTI 1973a, p.416).

There are some wider studies on the impact of stoppages on industrial efficiency. Pencavale (1977) presents an historical survey of the coalmining industry, while the work of Caves (1980) and Davies and Caves (1987) produce conflicting results on British and American productivity rates. Knight (1989) analysed a cross

section of industries for 1968, and found that the impact of strikes on productivity was weakly positive in most industries (although there remained notable exceptions). Meanwhile Machin (1988) completed a study of 52 engineering firms for 1982, concluding that the overall effect of unionisation was insignificant.[11] In all of these studies, there is no clearly accepted methodology. This problem has also plagued international comparisons of productivity, with investigators struggling to isolate the consequences of internal labour disputes. This is especially difficult where interplant linkages and quality issues distort the picture.[12]

However, we do know that, in international terms, Britain's record was not unique. In terms of days lost per 1,000 workers, Britain was ranked fourth amongst the G7 countries from 1967-1976 (Middleton 1996, p.456). Moreover, unrest was concentrated in a few sectors, with large plants particularly strike prone. But since many of Britain's mass production industries were characterised by low throughput and poor productivity per worker, the labour process became part of a wider malaise affecting British competitiveness. Richardson's warning (1991, pp. 432-33) is a reminder not to jump to hasty conclusions:

> The motor car industry, for example, has had a clear tendency to suffer from a large number of very often small strikes throughout much of the postwar period. It also an industry where performance levels and production have tended to fall behind those in the rest of Europe. To establish this association is not the same as establishing a strong causal connection however. No doubt industrial unrest harmed the UK motor car industry, but the extent of the damage done, in comparison with that caused by other factors is extremely difficult to establish. The problem here is that strikes are very public, noticeable events. They can be readily pointed to as self inflicted wounds. This does not mean that they are in the first rank of importance.

In his recent survey of the British motor industry, Church (1994, p.68) distinguished between a British industrial relations system characterised by high levels of unofficial strike activity and low labour turnover, and a continental system marked by regular confrontations and close labour control. His conclusions on formal versus informal conflict could equally apply to the regional pattern *within* Britain. Thus the differences between Halewood and Dagenham were

---

[11] For review of the literature, see Richardson (1991)

[12] See Jürgens *et al* (1993, p.276). They concentrate on tension between a company's German and British plants, noting how productivity in the UK was constrained because the Germans unilaterally changed design specifications on important component supplies.

potentially as significant as the differences between Britain and Germany. However, while international differences in workplace culture have been the subject of much investigation, a lack of data - especially in relation to productivity - has meant that regional dimensions have been largely ignored. The arguments presented here suggest that Development Area manufacturers did pay a locational premium, although this was part of the wider problems facing British producers.

§8.5 Towards an Explanation

Having demonstrated that the Development Area plants suffered greater disruption than their Midlands and South East counterparts, and given the evidence presented in §8.2, the large regional variations in industrial stoppages remain unexplained. The literature suggests two possible analytical directions: a macro focus centring on regression analysis and time series data; and a micro approach more usually identified with industrial sociology. A typical example of the former is the 1978 Department of Employment sponsored study *Strikes in Britain* (Smith *et al*), while Beynon's (1984) work remains the classic embodiment of investigative sociology.

When examining the macro perspective, the literature is surprisingly sparse. For the period before the mid 1970s, only two major British investigations explicitly considered the geography of unrest. Durcan *et al*'s *Strikes in Postwar Britain* (1983) was a seminal work. However, the book devoted little analytical content to an explanation of regional strike patterns. By contrast, Smith *et al* (1978) conducted a rigorous geographical analysis of stoppages from 1968-73. Their study undertook detailed regression analyses of strike rates, seeking to explain regional differences by such variables as the rate of earnings growth, average plant size, activity rates, female employment rates, population density and inter-sub-regional migration rates. The findings suggested that socio-economic variables provide 'only a very limited explanation of the pattern of adjusted strike proneness', and the authors concluded that more research was required on a wide range of socio-cultural factors more closely associated with qualitative research.[13]

[13] A summary of these findings may be found in Charlesworth *et al* (1996, p.186).

Micro-level studies offer a different agenda. While lacking the quantitative rigour of econometric analysis, they enable investigators to identify key differences in workplace industrial relations. The most enlightening comparisons centre on Ford's plants, where investigators have the benefit of Beynon's Merseyside study and a series of previously confidential labour statistics. These help to demonstrate how different traditions of workplace organisation explain major differences in regional strike proclivities.

Our analysis begins by studying the nature of industrial conflict in Dagenham and Halewood. Ford's figures allow per employee comparisons on a wide range of indicators, including disciplinary actions, warnings, discharges, absenteeism, labour turnover, and overtime worked. The results are available for two ten year periods, 1967-76, and 1975-84.

TABLE 8.10

FORD LABOUR PERFORMANCE INDICATORS PER WORKER, 1967-76

	Dagenham	Halewood
Disciplinary actions	100	307
Warnings	100	4000
Discharges	100	229
Absenteeism	100	103
Labour turnover	100	146
Overtime worked	100	73

Source: Woo (1986, p. 75)

In the late 1960s, the results (Table 8.10) reflect the problems with recruitment and training already noted in §8.2. More fundamental difficulties with labour discipline are also clear, with warnings in the North West forty times higher than in London, and suspensions showing a 300% differential. This suggests a strategy of personal challenge in Merseyside, with confrontations between workers and management becoming an accepted part of workplace culture. The table also indicates broadly similar levels of absenteeism, although labour turnover remained 50% higher in Liverpool.

TABLE 8.11

FORD LABOUR PERFORMANCE INDICATORS PER WORKER, 1975-84

	Dagenham	Halewood
Warnings	100	113
Suspensions	100	117
Discharges	100	29
Absenteeism	100	96
Labour turnover	100	38
Overtime worked	100	62

Source: Woo (1986 p, 75)

It is clear from Table 8.11 that disciplinary problems did improve in the late 1970s. Discharges fell significantly below South East levels, as did absenteeism, labour turnover and overtime. However, warnings and suspensions remained higher in Liverpool, contributing to the poor reputation which the plant acquired during the 1960s.

The pattern of industrial stoppages is explicable only when one recognises the cultural differences represented in these indicators. Halewood embraced different modes of workplace confrontation and conflict resolution. Workers were easily agitated, and more apt to question management authority on the shopfloor. This often took the form of personal challenges, which resulted in frequent low level disciplinary action (warnings) and a much higher level of discharges from 1967-76. There was also greater frequency of small scale stoppages, usually settled through informal negotiation procedures. These findings are confirmed in studies by Beynon (1984) and Friedman & Meredeen (1980), which identified two causes for this pattern: management style and the parity issue.[14]

As we have seen, Ford deliberately tried to engineer a new management style at Halewood. This was largely inspired by studying American techniques and modes of workplace organisation. Crucial to this approach was avoiding the multi-unionism then endemic in the car industry. The opening of its new plant had been preceded by the signing of exclusive agreements with the AEU and NUGMW.This led to a major clash with the TGWU, which threatened to black Halewood's cars

[14] See also Edwards (1986, p, 245).

unless their officials were given equal recognition (Beynon 1984). This provided the backdrop for five years of industrial conflict, with Ford trying to impose it's new vision of working relations. These were the years Beynon later referred to as 'the period of struggle', when unions strove to secure full negotiating rights for shop stewards, and to curtail obvious management abuses. But the conflict at Halewood had important long term implications. As one union official recalled,

> After we'd won all the legitimate cases we began to challenge the whole bloody system. Not altogether consciously mind you, but we started saying things like "you can have too much efficiency". We wouldn't work overtime unless we had twenty four hours notice. Things like that. They didn't like it because they didn't have absolute control of the labour anymore. *They had to enter into negotiations about what they were going* to do. Before, if you like, we were winning cases because higher management said what we wanted was fair. Then we started saying *to them*, "alright so it's 'fair' but we're not fucking having it anyway". (Beynon 1984, p.82)

A key battleground was the parity issue, an 'historical bogey' which dominated labour relations (Freidman & Meredeen 1980, p.206). Many of the peaks in the stoppage data can be identified with parity disputes.[15] In Ford's case, nominal equality with Dagenham was achieved only after two years of strikes and overtime bans. But this was only a partial victory. Since workers at Halewood were all new starters, Ford's merit-pay formulae continued to discriminate against them. By not bringing pay into line with South East levels, Halewood experienced continuous labour problems until 1967. The introduction of a new grading structure aimed to end the conflict, and unions secured a substantial pay rise in 1968. But the parity issue resurfaced in the early 1970s. This time unions wanted Ford to match Midlands rates, but the campaign ended with a simple weekly increase and the introduction of a no-strike clause. This was widely regarded as a defeat for the unions.

Vauxhall's story is a little more complicated. Before 1960, the company had acquired a reputation for relatively peaceful labour relations. The firm had also been very welcoming towards academic investigations, including Melman's (1958)

[15] For example, in 1968 several large scale disputes developed over re-grading and incentive pay structures in Merseyside plants; in 1969, 561,000 working days were lost in disputes over a new pay and productivity agreement at Halewood; and in 1972, there were large scale disputes at Linwood and Bathgate over parity with Midlands plants.

celebrated study of comparative productivity in Britain and the United States. However, little investigative work was completed during either the 1960s or the 1970s. We do know that labour relations deteriorated sharply after 1964, and that by 1973, the management were making some familiar claims:

> Absentee rates and labour turnover have showed a tendency to ride at distinctly higher levels than in Vauxhall's other plants and in particular the Company ran into a progression of labour relations problems. Such problems have not been uncommon in the motor industry at most plants over this period. On the other hand, the tendency for work-people to walk out 'at the drop of a hat', would appear to be a Merseyside characteristic. Issues which would normally be resolved in other areas by normal procedure, albeit under stress, can start off at Ellesmere Port with car park meetings after which employees go home without further parlay and so sever lines of joint communication. Such incidents cause lay-offs of other employees which constitute a secondary but often *more serious* basis for dispute (Vauxhall Motors Ltd. 1973, p. 465).

Part of the explanation is that Vauxhall were involved in experimentation at *all* of its plants. As well as a new recruitment policy, the firm instigated a new grievance procedure operating through an existing national Management Advisory Committee (MAC). The Liverpool workers refused to co-operate with the body, interpreting it as an attempt to wrest workplace control from shop stewards (Turner *et al* 1967, p.348). By the mid 1960s, Vauxhall conceded to union pressure and relaxed the MAC system, focusing on developing direct relations with shop stewards in Liverpool. This 'victory' for Ellesmere's workers was won after a series of stoppages and walkouts, which established a pattern for future negotiations. It also reflected the very real differences between established Merseyside patterns of working and management's preferred alternative.

Similar trends emerged in all the other Development Areas. Rootes suffered corresponding levels of absenteeism, poor labour discipline and stoppages. Its Linwood plant went through a comparable 'settling in' period, when both management and unions tried to assert their authority. There were failings on every side. The 1964 Ministry of Labour investigation concluded that the company's personnel manager was incompetent. He was described as 'a slow thinker' who was recruited 'from a firm with an appalling level of strikes' (PRO 1964d). The unions were criticised for their inability to maintain discipline. Their shop stewards were poorly trained, and an internal struggle between the AEU and

TGWU fragmented control, and led to a series of unofficial disputes and wildcat stoppages.

Again, wages and parity were the key concerns. Linwood's pay structure had been established under the Brabloch Agreement, when Lord Rootes had obtained the consent of Scottish unions for a regional pay structure (Sims and Wood 1984, p. 28). Until the Chrysler take-over, this meant that Rootes' Scottish employees were paid under a different system, and at lower rates than their English counterparts. Rootes had hoped this would lead to higher production, since piece-rate disputes would be avoided. But the new plant's management were sceptical about the approach (PRO 1964j) because it robbed them of their traditional negotiating framework. The whole payments question was thrown into further flux by Chrysler's take-over in 1967, which imposed a common wage system on all UK plants. But, as in Halewood, considerable damage had already been done to industrial relations:

> At Linwood, the absence of effective consultation procedures and the ineffective use of existing procedures continued to be reflected in repeated disruptions over minor issues. In the first three months, there were 27 stoppages, costing nearly 30,000 man hours. The new chief executive at Linwood commented in May: 'Chrysler is extremely concerned at our seeming inability to work many consecutive days without a stoppage'. While at Linwood, as in most of the other Chrysler plants, the stoppages were usually for brief periods, the implications for production planning and acceptable working relationships were far-reaching (Young and Hood 1977, p. 230).

The same conclusion applied to BMC's Scottish plant. Both unions and management had raised legitimate fears about the suitability of local workers for the assembly line. The AEU divisional organiser pointed out a key cultural difference, noting that 'many of the workers, although previously union members, have never experienced working in a federated firm, many of them previously worked in firms with no procedural arrangements where a stoppage was the quickest and most effective way of ending a dispute' (PRO 1964d).

The management dimension to Bathgate's problems centred on work flow. The traditional form of regulating output and maintaining quality in BMC's federated firms was through the piecework system. From its inception, Bathgate operated a time rate, transferring to a measured day rate in 1964. This robbed management of

the informal bargaining structures which had traditionally governed workplace relations. Management had little experience of countering unrest in a situation where wages were not directly linked to output. Thus, the Ministry of Labour noted how bosses repeatedly caved-in to union demands in the first two years, setting the tone for future negotiations (PRO 1964d) According to the Scottish Office, this highlighted a fundamental dichotomy:

> I believe that Sinnot recently said that instead of a vehicle works the firm was becoming a gas works. To my mind the difficulty at BMC is that we are dealing with questions of motivation which are rather theoretical, and the firm is most immediately concerned with hard facts such as the level of production and financial loss. (PRO 1964h).

Bathgate's short term failings were followed by several years of underperformance. Levels of industrial unrest remained high, and the plant later became entangled in the wider restructuring problems associated with BL's failure.

A similar fate befell Standard. A key element in Speke's story was the take-over of the company by Triumph in 1960 and by Leyland in 1967. Standard traditionally based labour relations on high wages and ceding shopfloor control to the workers. The basis of this scheme was a piecework regime which incorporated performance bonuses and a 'gang' system. Shop stewards controlled manning levels and line speeds, and bonus payments were used to motivate workers (Lewchuk 1987, pp. 195-202).

The system had already started to deteriorate in the mid 1950s, when John Black's departure as chairman heralded a wave of redundancies and a much harder management line.[16] But Leylands's take-over exacerbated the situation. The Lancashire firm had a much more paternalistic approach, relying on the exercise of unquestioned management authority. The new owners also had an overwhelming need to reduce Standard's wages bill. Leyland's paternalistic structures ran counter to Standard's long term tradition of mutuality, and the Standard workers resented surrendering shopfloor control to their new masters. Skirmishes in the early 1960s got progressively more bitter, and Speke #1 was put in the forefront of conflict.

[16] For a full discussion of the events surrounding Standard's labour relations in the 1950s and 1960s see Whisler (1995, pp. 137-52).

The Board successfully resisted attempts to bring Merseyside wages into line with Midlands levels. In fact, the company based its decision to build Speke #2 partly on the potential of lower wages (Whisler 1995, p. 146). There were changes in management stance, most notably the 1969 'Communication Campaign' launched by Donald Stokes, but stoppages continued to mount until the decision to introduce measured day rates in 1970 (the so-called Protected Earnings Plan). The Liverpool plants accepted the earnings plan in 1972, but only after lengthy talks and a significant increase in the basic rate. But the situation progressively worsened until Michael Edwardes' appointment as BL chairman. Unlike his predecessors, he was willing to confront unions head on. A protracted strike at Speke allowed Edwardes to carry out a closure threat, freeing BL to concentrate sports car production in the Midlands and South East, while establishing a strong position for future national labour negotiations.

Speke's problems were intimately related to changes in workplace culture. The shift from Standard's mutuality to a more paternalistic approach left both unions and workers embittered (Whisler 1995, pp 138-49). This coincided with the first phase of Merseyside expansion, and meant that both sides became involved in ritualistic trials of strength. The subsequent change to measured day working aggravated the situation, with management struggling to come to terms with new modes of workplace conflict. The long dispute of 1977 proved the ultimate test, with both labour and unions facing vastly different economic and political constraints.

The significance of this evidence is that workplace culture was important. As Beynon maintains in *Working for Ford* 'The fact that the PTA workers at Halewood were scousers mattered. The fact that they worked in an assembly plant of the Ford Motor Company mattered more' (1984, p.68). Existing studies of labour relations in the new plants have stressed the former rather than the latter. While the new workforces were less experienced and more volatile than their West Midlands and South East counterparts, management style also differed. The motor companies used their regional expansion to experiment with different forms of workplace organisation. This created a tradition of conflict and enmity which

endured for years. It was not a case of unions simply resisting change, but of management and shop stewards redefining their roles in a new industrial context.

This evidence supports Lewchuk's (1987) influential analysis of the postwar British motor industry and Broadberry's (1997) recent study of Anglo-American productivity differences. In both cases, it is possible to characterise Development Area 'experiments' as the industry's first belated moves towards adopting fordist production methods. Viewed in these terms, the concerted attempts to abandon piecework and establish new workplace structures can be seen as the first stage of a transformation crisis which afflicted the whole of British motor manufacturing in the 1970s. The regional element provided a keen edge to this battle, but Development Area expansion simply offered the opportunity for employers to develop a new workplace culture.

This leads us to consider one final question, namely whether the attempts to impose new modes of working need have created labour problems. Vauxhall questioned this in 1973, noting that industrial relations might have been improved 'by the continuous efforts of the management and by responsible Union leadership and Government influence' (Vauxhall Motors Ltd 1973, p.465). The recent experience of Japanese transplant manufacturers in Development Areas suggests - albeit in a different labour market context - that there is a potential for peaceful accommodation between capital and labour in greenfield sites.[17] But the possibility remains that the imposition of fordist structures on a British workforce was inevitably confrontational, and that reconciliation lay outside a slavish emulation of American techniques and philosophy.

This suggests that Britain faced a unique problem in postwar Europe. While the greatest potential for productivity growth resided in large scale fordist systems, British car making remained dominated by piecework and fragmented shopfloor control. Expansion into the regions offered a chance to reform these practices, but management did not appreciate the challenge this represented. The new workers possessed sophisticated bargaining skills, and they resisted the imposition of alien working practices and strove for parity with their counterparts in the South and

[17] For a review of the literature in this area, see Guest and Rosenthal (1993).

Midlands. While French and German car plants relied on armies of compliant guest workers (Bardou *et al* 1982), British manufacturers mistook provincialism for ignorance.

§8.6 Conclusion

This chapter has demonstrated that the Development Areas were more strike prone than regions traditionally associated with motor manufacturing. It has also identified different patterns of conflict, with a greater emphasis on frequent, short term disputes in Scotland and the North West.

The conventional explanation for these trends has centred on the origins of new employees, and the greater degree of militancy amongst 'green' workers. While industrial background is clearly important in conditioning workplace behaviour, so too is management style. All the motor firms used their new plants to experiment with different forms of labour control. These centred on new payment systems, negotiating frameworks and grievance procedures. Broadly speaking, this can be characterised as a move towards a fordist management structure. While labour opposed many of these innovations, bosses also struggled to accommodate themselves to a new bargaining framework. The result was an extended period of industrial disruption, which established damaging precedents. Plants in the Midlands and South East experienced a similar 'transformation crisis' in the 1970s, but by this time, a distinct pattern of unrest was institutionalised in the Development Areas.

The costs of this industrial disruption are difficult to assess. Both demand and supply constraints need to examined. We can see that for plants operating at the spatial limits of profitability (Speke, Linwood, Bathgate), labour problems helped contribute to their downfall. But for Halewood and Ellesmere Port, the effects were seen in unfavourable sourcing decisions and a difficulty in securing new investment. In all of these cases, the economic context of the 1970s was critical in forcing retrenchment.

9 Summary and Conclusions

§9.1 Introduction

We began Chapter One by posing five questions:

- How did the relationship between industry and the state develop in postwar Britain?
- What were the processes and motivations behind British location policy?
- Were locational penalties anticipated at either government or enterprise level?
- Did controls lead to poor site selection - with quantifiable cost penalties?
- What were the consequences for individual firms?

The following summary considers each in turn.

§9.2 Industry and the State

Britain was unique in establishing a distribution of industry policy which embraced coercive and persuasive tactics. However, the *exercise* of these powers challenged fundamental beliefs about the efficacy of market forces and the legitimate role of the state. This was because the British regional policy mix was interventionist in scope.

The distinction between interventionist and market based approaches is vital in understanding the changing relationship between industry and the state. Market based initiatives rely on removing imperfections in labour and capital markets, while the interventionist agenda identifies flaws in market solutions and advocates imposing settlements on entrepreneurs and workers. Existing studies have correctly characterised British legislation as interventionist, but have ignored the administrative and departmental climate. A detailed study of policy execution reveals a deep scepticism towards interventionist remedies. This was fuelled by conservatism and a lack of economic understanding. The entire history of regional policy from 1945-64 can, in fact, be represented as a gradual move from market based perspectives to an interventionist strategy. While policy tools remained dirigiste, the nature of the wartime settlement and the Board of Trade's regional policy portfolio ensured a passive approach.

These practices came under an unassailable challenge in the late 1950s. It was only then that political will, a conducive macroeconomic background and effective economic intelligence combined to produce a paradigm shift. This saw the Board of Trade abandon its individualistic focus and embrace wider notions of externalities. The previously unequal location bargain between 'state' and 'business' was replaced by a balanced negotiating framework. For the first time, the carrot combined with the stick to produce meaningful industrial relocation. The implication is that, for much of the 1940s and 1950s, the government lacked the economic intelligence and political drive to successfully challenge business.

§9.3 Motives and Processes

Regional policy is best regarded as part of the legislative package associated with universal suffrage and a developing consensus on social issues. However, different political ideologies endorse different forms of regional policy. If we employ the interventionist/market based schema, it is clear that centre-left parties should favour an interventionist strategy since they support the use of state power to alter market outcomes. This is in contrast to a centre-right agenda, which shares a commitment to market based solutions and laissez faire principles. Unsurprisingly, these divisions shaped wartime policy discussions between Labour and Conservative ministers, and influenced postwar interpretations of regional policy administration.

Thus, the historiography distinguishes four phases of regional policy activity from 1945-64: an active period from 1945-50 associated with the first postwar Labour government; a passive period under successive Conservative administrations in the 1950s, a transitional phase from 1959-63 corresponding with the Brighton Revolution, and an active period lasting for the remainder of the 1960s. However, the left/right model does not reflect policy profile during these years. In particular, a commitment to free market solutions endured throughout the 1940s. This suggests that the extent and radicalism of British distribution of industry measures under Attlee has been exaggerated, and is indicative of an entrenched 'Establishment View' on regional policy. This view eschewed coercion as a policy tool, and used persuasion to provoke industrial relocation.

Bizarrely, interventionism was only adopted under a Conservative government. The nature of this conversion suggests that Brittan was right to identify a 'great reappraisal' in Tory thinking during 1960. This conversion endorsed a system of controls and incentives, which had proved anathema to previous generations of politicians and officials. It also heralded the unprecedented decentralisation of the British motor industry, which became an intellectual battleground for proponents and critics of a regional planning framework.

§9.4 Expectations

In many respects, the decentralisation programme was part of a knee-jerk response to rising regional unemployment in the late 1950s. But it was also crucial in *demonstrating the possibilities* and dangers of an interventionist strategy. From its inception, IM6 had struggled to reconcile the needs of individual manufacturers with wider economic and social issues. This meant that, by 1960, officials had acquired nearly twenty years of experience in dealing with industrial location. The Board of Trade could also exploit the growing body of academic research which was linked to the expansion of regional science in Britain. Most of this suggested that efficient relocation could be achieved if establishment costs were defrayed by appropriate compensation.

In general, the motor firms resisted relocation. Negotiations show how bosses were wary of increased transportation costs and the problems of dislocation. But they also regarded the new sites as an opportunity to experiment with different forms of workplace control. In particular, it was hoped that the regional plants would benefit from modern machinery and a different industrial relations climate. Firms aimed to break traditional patterns of union control, and establish fordist working programmes.

Different companies adopted different negotiating strategies. The American-owned subsidiaries of Ford and Vauxhall drew on a wealth of US experience, and engaged the government in a lengthy dialogue. From the very beginning, these firms decided that Scottish sites were uneconomic and that Merseyside offered the best solution. These views were shared by BMC and Rootes, but the British

companies were placed at a disadvantage during negotiations. This was because (a) BMC was a federated firm which needed to secure expansion at several sites in the Midlands and South, and (b) Rootes delayed its IDC application in the hope of securing a last-mover advantage. In both cases, the government was able to out-manoeuvre the British firms, and secure a commitment to Scottish relocation. But all the companies won substantial financial support.

§9.5 The Right Sites?

By using published and unpublished data, it was possible to derive spatial cost profiles for the decentralised plants. The nature of this information precluded a longitudinal survey, but did allow benchmark estimates to be made for 1971/72. The investigation was based on Luttrell's methodology, and sought to derive a per unit estimate of extra costs incurred. This had the advantage of relating findings to the Clay Committee's original performance criteria.

The estimates suggest that relocation did increase production costs, although financial incentives and lower labour rates reduced expenditure. As many feared, Scottish sites were particularly disadvantaged. A key element in the analysis was the REP, an *operational subsidy* introduced in the mid-1960s. In tandem with other incentives, this allowed firms to defray many additional manufacturing costs. This study implies that previous analysts have underestimated the importance of financial compensation for Development Area firms.

Labour relations were also examined in the new plants. It was found that, while regional sites were more strike prone than traditional regions, they experienced different patterns of conflict, with a greater emphasis on frequent, short term disputes. The analysis acknowledged that workers were more militant in Development Areas, but suggested that management style was an important variable. All the motor firms used their new plants to experiment with labour discipline and bosses struggled to come to terms with this new bargaining framework. The result was an extended period of disruption, which established dangerous precedents.

§9.6 Consequences

The consequences for individual firms depended on their competitive strength and corporate profile. In all cases, Development Area relocation imposed additional constraints on motor manufacturing. Break-even points were increased, and there was an additional imperative to achieve high throughput. But with the exception of the Scottish plants, locational penalties were relatively insignificant in relation to retail price and turnover. The analysis suggests that poor product quality was a more important cause of competitive failure.

While the shutdown of the Chrysler, British Leyland and Triumph plants suggests a locational element, their demise cannot be understood without reference to the larger crises affecting British motor manufacturing. It is clear that federated firms failed to adopt fordist techniques, and produced shoddy products throughout the 1970s. The failure of Linwood was intrinsically linked to the fortunes of the Imp and the Arrow range, while Speke's fate was sealed by the TR7 disaster and the need to rationalise production. Similarly, Bathgate was sacrificed because it produced a peripheral product in a peripheral location. For most of these firms, lost output did not equate with lost sales. Their problems were more deep-rooted than militant agitation.

The American-owned subsidiaries faced different problems. While production costs were more acceptable at Halewood and Ellesmere Port, they were still above international norms. Moreover, labour unrest was a recurring problem. The results were unfavourable sourcing decisions and a difficulty in securing new investment. Here again, the industrial context of the late 1970s was critical in forcing retrenchment.

§9.7 Reflections

In 1945, Britain introduced a comprehensive regional policy. While both main political parties shared an interest in reducing unemployment differentials, they nevertheless represented different policy constituencies. While Labour favoured an interventionist strategy, the Conservatives and the Board of Trade resisted planning solutions. The concentration on limited intervention revealed an

'Establishment View' on regional policy. In the context of postwar Britain, this meant that businesses became involved in an unequal bargain with the state. Despite the provision of coercive legislation, ministers and officials felt unable to challenge industrialists. Key elements in this story were the macroeconomic environment, and the way in which economic theory developed in postwar Britain. It was not until 1960 that academic arguments and political pressure forced a reappraisal.

When the new policy was applied in 1960, British motor firms were sent to the Development Areas. If we use the same criteria employed by the Clay Committee in the 1950s, it seems clear that Merseyside-based firms operated within the spatial limits of profitability. The failures of the decentralisation plan were linked to a wider crisis affecting British manufacturing. Part of this story was that marginal firms acquired marginal locations.

However, Development Area manufacturing secured a hidden bonus. As Hall had predicted (see p. 192), expansion in politically sensitive regions insured that the government became 'deeply committed to the continued prosperity of the motor industry'. When Chrysler and BL threatened to fold in the 1970s, the regional element heightened political debate. More recently, Ford was able to secure substantial government aid for changes at its Merseyside plant. If we extend the analysis to include wider forms of assistance, then the broad generalisations employed by Dunnett (1980) and Foreman-Peck *et al* (1995) become less tenable. In short, the economics of Development Area manufacturing are more complicated than distance suggests.

APPENDIX - British Motor Industry Statistics

A1.1 Introduction

This appendix details the key statistics for the British motor industry first reported in Chapter 3 and then used elsewhere in this study. Two objectives underlie this exercise: first to obtain a consistent record of the industry's performance in the twentieth century; and secondly to combine statistics from the Society of Motor Manufacturers and Traders with official CSO estimates. By extending coverage from 1900 to 1990, the data provides details of the competitive environment before, during, and after regional intervention. In this way, it is hoped to provide a firm foundation for policy analysis.

The CSO estimates adopt standard SIC definitions. The Business Statistics Office put postwar data on a consistent basis in 1978. Under the 1978 regime, the motor industry is defined in terms of Minimum List Heading 381 - *Motor Vehicle Manufacturing.*

Minimum List Heading 381 includes the following activities: manufacturing and assembling passenger cars (including three wheeled vehicles), commercial goods vehicles, road tractors solely for tractor-trailer combinations, buses, battery electric vehicles, motor-drawn trailers and caravans; manufacturing engines, bodies, chassis, chassis frames, seats and safety belts, cabs for commercial vehicles; motor body shells and all other parts and accessories (other than rough or semi-finished castings and forging) when made wholly or primarily of metal and not specified in other MLH categories.

TABLE A1

PRODUCTION OF MOTOR VEHICLES IN THE UK, 1908-92

Year	Cars	Station Wagons	Buses	CVs	Buses and CVs	Total Vehicles
1908						10,500
1909						11,000
1910						14,000
1911						19,000
1912						23,200
1913						34,000
1922						73,000
1923	71,936				23,604	95,000
1924	116,600				30,000	146,600
1925	132,000				35,000	167,000
1926	153,500				44,500	198,000
1927	164,553				47,227	211,780
1928	165,352				46,525	211,877
1929	182,347				56,458	238,805
1930	169,669				66,859	236,528
1931	158,997				67,310	226,307
1932	171,244				61,475	232,719
1933	220,779				65,508	286,287
1934	256,866				85,633	342,499
1935	311,544				92,176	403,720
1936	353,838				107,609	461,447
1937	389,633				118,116	507,749
#1938	341,028				103,849	444,877
#1939	305,000				97,000	402,000
1940	1,949				131,920	133,869
1941	5,117				140,313	145,430
1942	5,468				155,054	160,522
1943	1,649				147,669	149,318
1944	2,108				130,847	132,955
1945	16,938				122,467	139,405
1946	219,162		9,616	136,504	146,120	365,282
1947	287,000		12,737	141,933	154,670	441,670
*1948	334,815		13,077	160,225	173,302	508,117
1949	412,290		14,531	201,842	216,373	628,663
1950	522,515		11,347	249,810	261,157	783,672
1951	475,919		11,037	246,927	257,964	733,883
1952	448,000		8,733	232,925	241,658	689,658
1953	594,808		7,158	232,309	239,467	834,275
*1954	769,165		8,081	260,633	268,714	1,037,879
1955	897,560		9,657	329,851	339,508	1,237,068
1956	707,594		9,678	287,272	296,950	1,004,544
1957	860,842	51,934	9,498	278,755	288,253	1,201,029
*1958	1,051,551	90,507	15,071	297,785	312,856	1,454,914

Year	Cars	Station Wagons	Buses	CVs	Buses and CVs	Total Vehicles
1959	1189943	96,285	17,379	353,105	370,484	1,656,712
1960	1,352,728	109,109	19,048	438,924	457,972	1,919,809
1961	1,003,967	110,069	17,050	443,117	460,167	1,574,203
1962	1,249,426	138,619	16,590	408,514	425,104	1,813,149
1963	1,507,939	168,828	18,064	385,717	403,781	2,080,548
*1964	1,867,640	175,371	18,481	446,255	464,736	2,507,747
1965	1,722,045	164,565	17,974	437,242	455,216	2,341,826
1966	1,603,679	145,549	24,231	414,444	438,675	2,187,903
1967	1,552,013	160,013	18,224	366,882	385,106	2,097,132
1968	1,815,936	172,156	18,537	390,649	409,186	2,397,278
*1969	1,717,073	148,701	23,322	442,398	465,720	2,331,494
1970	1,640,966	124,272	23,234	434,298	457,532	2,222,770
1971	1,741,940	136,009	26,518	429,688	456,206	2,334,155
1972	1,921,311	180,523	30,163	377,956	408,119	2,509,953
1973	1,747,321	178,328	30,436	386,187	416,623	2,342,272
1974	1,534,119	155,919	33,667	368,899	402,566	2,092,604
1975	1,267,695	155,122	35,643	345,061	380,704	1,803,521
*1976	1,333,449	152,441	33,176	338,881	372,057	1,857,947
1977	1,327,820	150,064	27,633	358,787	386,420	1,864,304
1978	1,222,949	136,168	23,042	361,476	384,518	1,743,635
1979	1,070,452	138,599	25,911	382,529	408,440	1,617,491
1980	923,744	104,165	21,572	367,598	389,170	1,417,079
1981	954,650	68,189	12,444	217,111	229,555	1,252,394
1982	887,679	51,144	13,107	255,691	268,798	1,207,621
*1983	1,044,597	56,601	15,616	228,898	244,514	1,345,712
1984	908,906	47,597	4,726	220,099	224,825	1,181,328
1985	1,047,973	73,401	3,885	262,088	265,973	1,387,347
1986	1,018,962	61,871	2,514	226,171	228,685	1,309,518
1987	1,142,683	70,341	2,178	244,550	246,728	1,459,752
*1988	1,226,835	35,529	2,511	314,832	317,343	1,579,707
1989	1,299,082	42,622	2,171	324,419	326,590	1,668,294
1990	1,295,611	35,611	1,504	268,842	270,346	1,601,568
1991	1,236,900	22,069	1,254	215,887	217,141	1,476,110
1992	1,291,880	**	1,595	246,858	248,453	1,540,333

Notes:

1908 to 1956: no breakdown available between Cars and Station Wagons
1908 to 1945: no breakdown available between CV's and Buses
From 1984 minibuses are included in Commercial Vehicles
#1938 and 1939 are SMMT estimates
* 53 Weeks
**Included in cars.

Source: SMMT (1939,1991, 1993)

TABLE A2

MOTOR CAR PRODUCTION BY PRINCIPAL COUNTRIES, 1940-92

Year	UK	France	W. Ger.	Italy	Sweden	Japan	Canada	USA	Spain
1940	1,949						109,911	3,717,385	
1941	5,117						96,603	3,779,682	
1942	5,468						12,236	222,862	
1943	1,649						0	139	
1944	2,108						0	610	
1945	16,938	1,565	1,293	2,093			1,868	69,532	
1946	219,162	30,429	9,962	10,989	703		91,871	2,148,699	
1947	287,000	66,277	9,541	23,375	2,545	110	167,257	3,558,178	
1948	334,815	100,091	29,945	44,425	2,988	381	166,819	3,909,270	
1949	412,290	187,653	104,055	65,379	5,341	1,070	193,556	5,119,466	
1950	522,514	257,292	219,409	101,310	9,911	1,594	284,076	6,665,863	
1951	475,919	319,881	276,622	119,267	13,078	3,611	282,714	5,338,435	
1952	448,000	369,938	317,643	113,653	10,529	4,837	283,534	4,320,794	
1953	594,808	371,168	387,895	143,598	19,176	8,789	360,385	6,116,948	
1954	769,165	444,242	561,172	180,851	28,564	14,472	287,191	5,558,897	
1955	897,560	561,465	762,205	230,978	33,140	20,268	375,028	7,920,186	
1956	707,594	662,683	910,966	279,900	37,849	32,056	374,312	5,816,109	
1957	860,842	738,290	1,040,188	318,775	52,367	47,121	340,016	6,113,344	
1958	1,051,551	968,990	1,306,854	369,374	75,439	50,463	298,349	4,257,812	
1959	1,189,943	1,127,982	1,503,424	470,659	95,647	78,598	301,801	5,591,243	
1960	1,352,728	1,175,301	1,816,779	595,097	108,382	165,094	325,752	6,674,796	
1961	1,003,967	1,063,595	1,903,975	693,695	109,835	249,508	327,979	5,542,707	
1962	1,249,426	1,340,328	2,109,166	877,860	129,192	268,784	428,710	6,933,240	
1963	1,607,939	1,520,827	2,414,092	1,105,291	145,672	407,830	534,103	7,637,728	
1964	1,867,640	1,390,312	2,650,183	1,028,931	161,957	579,660	560,678	7,751,822	112,682
1965	1,722,045	1,423,365	2,733,732	1,103,932	181,755	696,176	710,711	9,305,561	145,691
1966	1,603,679	1,785,906	2,830,050	1,282,418	173,499	877,656	701,537	8,598,326	247,006
1967	1,552,013	1,776,502	2,295,714	1,439,211	193,976	1,375,755	720,807	7,436,764	276,258
1968	1,815,936	1,833,047	2,862,186	1,544,932	223,330	2,055,821	900,906	8,848,620	311,531
1969	1,717,073	2,168,462	3,312,537	1,477,366	242,887	2,611,499	1,035,551	8,224,392	370,955
1970	1,640,966	2,458,038	3,527,864	1,719,715	278,971	3,178,708	940,389	6,550,203	450,426
1971	1,741,940	2,693,989	3,696,779	1,701,064	287,398	3,717,858	1,096,062	8,583,653	452,921
1972	1,921,311	2,719,401	3,521,540	1,732,379	317,962	4,022,289	1,154,525	8,828,205	600,559
1973	1,747,321	2,866,728	3,649,880	1,823,333	341,503	4,470,550	1,227,432	9,667,571	706,433
1974	1,534,119	2,698,785	2,839,596	1,630,686	326,743	3,931,842	1,165,635	7,324,504	704,574
1975	1,267,695	2,546,154	2,907,819	1,348,544	316,386	4,568,120	1,044,822	6,717,177	696,124
1976	1,333,449	2,979,559	3,546,900	1,471,308	317,380	5,027,792	1,137,313	8,497,893	753,125
1977	1,327,820	3,092,439	3,790,544	1,440,470	235,383	5,431,045	1,162,519	9,213,600	988,964
1978	1,222,949	3,111,380	3,890,176	1,508,597	254,256	5,748,269	1,139556	9,175,836	986,116
1979	1,070,452	3,220,394	3,932,556	1,480,904	296,540	6,175,771	987,673	8,433,662	965,809
1980	923,744	2,938,581	3,520,934	1,445,221	235,320	7,038,108	846,777	6,375,506	1,028,813
1981	954,650	2,611,864	3,577,807	1,257,340	258,261	6,974,131	803,117	6,253,138	855,325
1982	887,679	2,777,125	3,761,436	1,297,351	294,792	6,881,586	807,645	5,073,496	927,500
1983	1,044,597	2,960,823	3,877,641	1,395,531	344,702	7,151,888	968,867	6,781,184	1,141,581

Year	UK	France	W. Ger.	Italy	Sweden	Japan	Canada	USA	Spain
1984	908,906	2,713,289	3,790,164	1,439,283	352,585	7,073,173	1021,536	7,773,332	1,176,893
1985	1,047,973	2,632,366	4,166,686	1,389,156	400,748	7,646,816	1077,935	8,184,821	1,230,071
1986	1,018,962	2,773,094	4,310,828	1,652,452	421,255	7,809,809	1061,365	7,828,783	1,281,899
1987	1,142,683	3,051,830	4,373,629	1,713,300	431,777	7,891,087	809,827	7,098,910	1,402,574
1988	1,226,835	3,223,987	4,346,283	1,884,313	407,117	8,198,400	1,024,807	7,110,728	1,497,967
1989	1,299,082	3,409,017	4,563,673	1,971,969	384,206	9,052,406	983,897	6,823,097	1,638,615
1990	1,295,611	3,294,815	4,660,657	1,874,672	335,853	9,947,972	940,319	6,077,449	1,679,301
1991	1,236,900	3,187,634	4,659,480	1,632,904	269,341	9,753,069	890,847	5,438,579	1,773,752
1992	1,291,880	3,329,490	4,863,721	1,476,627	293,499	9,378,694	1,019,872	5,665,863	1,790,615

Source: AMMA (1992, Table 5)

TABLE A3

GROSS OUTPUT OF MOTOR VEHICLE INDUSTRY AS PROPORTION OF TOTAL MANUFACTURING GROSS OUTPUT, 1948-90 (current prices)

Year	Manufacturing Gross Output (£m)	Motor Vehicles Gross Output (£m)	Cars as % of Manufacturing Output
1948	10,632	435	4.1
1951	15,589	715.8	4.6
1954	17,419	882.5	5.1
1958	22,039	1,344.6	6.1
1963	27,772	2,030.2	7.3
1968	38,697	2,581.1	6.7
1970	47,359.8	3,238.3	6.8
1971	50,324.3	3,496.2	6.9
1972	53,759.9	3,664.9	6.8
1973	63,340.1	4,061.5	6.4
1974	83,153.1	4,838.8	5.8
1975	93,047.6	5,976.2	6.4
1976	113,169.5	6,830.9	6.0
1977	132,030.1	8,448.6	6.4
1978	142,980.1	9,404.7	6.6
(a)1979	165,090.1	10,873.7	6.6
(b)1979	155,364.6	10,976.7	7.1
1980	163,913.3	10,442.9	6.4
1981	16,5471	10,164	6.1
1982	175,656.7	10,656.9	6.1
1983	189,200.1	12,050	6.4
1984	209,656.6	12,641.3	6.0
1985	226,635.7	14,281.5	6.3
1986	232,499.1	15,140	6.5
1987	254,682.6	17,629.4	6.9
1988	283,433.9	20,882	7.4
1989	309,020.1	23,399.2	7.6
1990	315,295.2	23,659.6	7.5

Notes:
Years from 1948 to 1970 are based on Standard Industrial Classification Reference 381 Motor Vehicle Manufacturing - Source (HMSO 1978). Years from 1970-79(a) have been calculated from the Annual Census of Production, based on SIC 381 - Source (CSO 1981). Years from 1979(b) to 1990 are based on Annual Census of Production, Standard Industrial Classification Revised 1980 Division Class Group 35 - Manufacture of Motor vehicles and parts thereof.

TABLE A4

EMPLOYMENT IN THE MOTOR INDUSTRY, SELECTED YEARS, 1948-90

	Manufacturing Employment (Thousands)	Total Car Employment (Thousands)	Cars as % of Manufacturing Employment
1948	7,080	287.4	4.1
1951	7,594	324.2	4.3
1954	7,672	312.4	4.1
1958	7,,781	339.4	4.4
1963	7,952	434.6	5.5
1968	7,826	457	5.8
1970	8,033	488.9	6.1
1971	7,829.8	483.1	6.2
1972	7,521.9	480.6	6.4
1973	7,616.1	492.6	6.5
1974	7,754.9	501.7	6.5
1975	7,467	481.5	6.4
1976	7,305.1	472.2	6.5
1977	7,280.1	493.9	6.8
1978	7106	496.2	7.0
(a)1979	6,926.6	482.5	7.0
(b)1979	6,909.8	491.2	7.1
1980	6,495	448.7	6.9
1981	5,777.9	369.5	6.4
1982	5,360.5	325.4	6.1
1983	5,078.8	302.4	6.0
1984	5,059.4	288	5.7
1985	4,975.7	276.8	5.6
1986	4,878.2	261	5.4
1987	4,874.4	258	5.3
1988	4,932.2	265.4	5.4
1989	4,853.1	266.8	5.5
1990	4,839.9	267.8	5.5

Notes:

Years from 1948 to 1970 are based on Standard Industrial Classification Reference 381 Motor Vehicle Manufacturing - Source (HMSO 1978). Years from 1970-79(a) have been calculated from the Annual Census of Production, based on SIC 381 - Source (CSO 1981). Years from 1979(b) to 1990 are based on Annual Census of Production, Standard Industrial Classification Revised 1980 Division Class Group 35 - Manufacture of Motor vehicles and parts thereof.

TABLE A5

CAPITAL EXPENDITURE IN THE MOTOR INDUSTRY, SELECTED YEARS, 1948-90 (current prices)

Year	Manufacturing Total Capital Expenditure (£)	Cars Total Capital Expenditure (£)	Cars as % of Manufacturing Expenditure (%)	Manufacturing New Building Work (£)	Cars New Building Work (£)	Cars as % of Manufacturing Building (%)-	Manufacturing Plant and Machinery (£)	Cars Plant and Machinery (£)	Cars as % of Plant and Machinery (%)
1948	283	14.6	5.2	54	2	3.7	207	12.2	5.9
1951	430	21.7	5.0	84	3.8	4.5	311	17	5.5
1954	531	21.5	4.0	116	2.9	2.5	378	17.7	4.7
1958	861	43.3	5.0	203	13.6	6.7	609	28.5	4.7
1963	1,026	86.9	8.5	233	25.6	11.0	731	59.6	8.2
1968	1,525	79	5.2	285	11.5	4.0	1,162	66.4	5.7
1970	2,164	178.2	8.2	407	24.3	6.0	1,641	152.3	9.3
1971	2,203.1	139.9	6.4	394.4	19	4.8	1,706.9	117.5	6.9
1972	1,982.4	90	4.5	355.7	14.1	4.0	1,533.4	73.1	4.8
1973	2,282.3	138.5	6.1	402.5	19.2	4.8	1,727.5	111.7	6.5
1974	3,072.4	193.1	6.3	587.1	24.1	4.1	2,251.2	159.8	7.1
1975	3,535.8	177	5.0	593.5	18.1	3.0	2,690.8	147.5	5.5
1976	3,895.8	198.7	5.1	532.6	22.7	4.3	3,036.4	160.6	5.3
1977	4,774.8	321.4	6.7	665.3	39.8	6.0	3,613.3	239.1	6.6
1978	5,842.3	426.4	7.3	824.3	75.6	9.2	4,428	324.1	7.3
(a)1979	6,946.4	683.1	9.8	1,055	93.4	8.9	5,183.4	544.6	10.5
(b)1979	6,750.1	688.8	10.2	1,018.1	93.9	9.2	5,009.5	550	11.0
1980	6,506.9	628.4	9.7	1,046	98.1	9.4	4,840.9	517.6	10.7
1981	5,493.1	474.1	8.6	862.1	70.1	8.1	4,075.6	384.6	9.4
1982	5,513.6	467.6	8.5	697.9	52.8	7.6	4,272.1	400.3	9.4
1983	6,060.9	497.9	8.2	655.9	31.7	4.8	4,792.5	436.5	9.1
1984	7,589.3	596	7.9	915.5	42.4	4.6	5,916.8	518.7	8.8
1985	8,742.2	659.4	7.5	1,073.6	50.1	4.7	6,881.4	585.6	8.5
1986	8,705.2	676.7	7.8	1,010.1	55.3	5.5	6,921.1	577.1	8.3
1987	9,754	611.7	6.3	1,164.3	56.5	4.9	2,768.9	556.3	20.1
1988	12,169.7	924.8	7.6	1,507	86.1	5.7	2,953.4	829.7	28.1
1989	14,498.5	1,338.6	9.2	2,003.6	186.7	9.3	3,228.6	1137.9	35.2
1990	14,308.9	1,521.9	10.6	1,882.4	163.7	8.7	3,991	1253.5	31.4

Notes

Years from 1948 to 1970 are based on Standard Industrial Classification Reference 381 Motor Vehicle Manufacturing - Source (HMSO 1978). Years from 1970-79(a) have been calculated from the Annual Census of Production, based on SIC 381 - Source (CSO 1981). Years from 1979(b) to 1990 are based on Annual Census of Production, Standard Industrial Classification Revised 1980 Division Class Group 35 - Manufacture of Motor vehicles and parts thereof.

TABLE A6

SUMMARY OF MOTOR VEHICLES IN USE, GREAT BRITAIN AND NORTHERN IRELAND, 1904-81

Year	Cars	Taxis Buses & Coaches	Goods	Tractors	Exempt Vehicles	Agric Tractors	Motor Cycles	Total
1904	8,465	5,345	4,000					17,810
1905	15,895	7,491	9,000					32,386
1906	23,192	9,828	12,000					45,020
1907	32,451	12,398	14,000				34,664	93,513
1908	40,902	14,666	18,000				35,247	108,815
1909	48,109	16,310	22,000				35,784	122,203
1910	53,169	24,466	30,000				36,242	143,877
1911	72,106	33,199	40,000				47,572	192,877
1912	88,265	34,869	52,600				69,501	245,235
1913	105,734	38,544	63,600				97,784	305,662
1914	132,015	51,167	82,000				123,678	388,860
1915	139,245	44,480	84,600				138,496	406,821
1916	141,621	51,293	82,100				152,960	427,974
1917	110,435	47,781	64,100				118,806	341,122
1918	77,707	41,815	40,700				69,206	229,428
1919	109,715	44,081	62,000				114,722	330,518
1920	186,801	74,068	101,000				287,739	649,608
1921	245,882	98,107	134,549	4,316	10,034		378,338	871,226
1922	319,311	79,738	161,008	3,812	11,954		384,360	960,183
1923	389,767	88,747	183,895	3,762	13,985		437,997	1,118,153
1924	482,356	97,489	213,137	3,701	15,264		504,367	1,316,314
1925	590,156	102,674	236,038	3,497	17,032		581,228	1,530,625
1926	695,634	104,634	261,697	3,689	17,276		646,295	1,729,225
1927	800,112	98,823	288,015	4,807	18,171		690,675	1,900,603
1928	900,557	97,366	311,410	3,275	20,144		721,402	2,054,154
1929	998,489	99,645	336,122	3,224	22,252		739,567	2,199,299
1930	1,075,081	102,791	354,948	3,295	24,154		732,698	2,292,967
1931	1,103,715	89,182	367,452	2,982	24,744		633,249	2,221,324
1932	1,149,231	86,743	377,145	2,793	26,663		606,113	2,248,688
1933	1,226,541	86,805	394,770	2,688	28,168		568,093	2,307,065
1934	1,333,590	86,900	420,799	2,707	30,017		553,458	2,427,471
1935	1,515,019	87,383	442,187	3,069	33,057		521,128	2,601,843
1936	1,675,104	87,820	467,561	2,820	38,562		510,242	2,782,109
1937	1,834,248	87,474	487,750	2,915	49,446		491,718	2,953,551
1938	1,984,430	89,410	504,028	2,998	63,336		466,265	3,110,467
1946	1,807,067	107,025	572,432	3,370	61,593	155,471	467,058	3,174,016
1947	1,983,505	117,021	684,102	3,811	72,690	194,533	533,783	3,589,445

Year	Cars	Taxis Buses & Coaches	Goods	Tractors	Exempt Vehicles	Agric Tractors	Motor Cycles	Total
1948	2,00,2201	130,519	785,334	4,123	79,823	242,906	560,107	3,805,013
1949	2,178,411	136,892	862,136	4,238	75,383	283,836	655,200	4,196,096
1950	2,307,379	139,609	915,556	4,335	68,930	313,992	761,500	4,511,301
1951	2,433,172	138,670	955,003	4,384	71,283	301,360	859,034	4,762,906
1952	2,564,686	135,261	985,832	4,687	97,925	324,132	962,210	5,074,733
1953	2,824,789	118,583	1,018,453	4,882	100,822	347,811	1,052,864	5,468,204
1954	3,172,869	110,186	1,056,391	5,053	100,977	367,403	1156568	5,969,447
1955	3,609,400	104,077	1,134,257	5,453	102,105	390,962	1,276,894	6,623,148
1956	3,980,511	101,692	1,200,588	5,711	107,949	403,172	1,394,282	7,193,905
1957	4,282,438	99,398	1,244,533	5,842	110,227	424,968	1,497,050	7,664,456
1958	4,651,021	97,761	1,298,320	5,794	110,755	439,669	1,546,183	8,149,503
1959	5,080,510	94,282	1,358,855	6,197	111,209	459,370	1,764,535	8,874,958
1960	5,650,461	95,302	1,432,475	6,376	116,303	471,192	1,894,372	9,666,481
1961	6,113,764	93,512	1,490,007	6,535	121,369	481,420	1,920,832	10,227,439
1962	6,706,159	94,896	1,511,060	5,967	123,848	483,312	1,897,440	10,822,682
1963	7,564,650	98,173	1,571,772	6,206	131,745	496,401	1,878,312	11,747,259
1964	8,436,193	98,644	1,619,644	6,836	137,838	506,795	1,866,128	12,672,078
1965	9,131,075	98,443	1,643,353	6,824	145,251	500,719	1,735,495	13,261,160
1966	9,746,887	95,895	1,610,466	6,757	162,639	478,335	1,519,981	13,620,960
1967	10,554,193	96,350	1,661,854	6,644	168,305	496,578	1,463,764	14,447,688
1968	11,078,000	101,500	1,606,800	6,400	179,700	489,300	1,343,000	14,804,700
1969	10,504,300	104,060	1,604,690	5,880	186,410	475,510	1,238,920	14,119,770
1970	11,801,777	105,421	1,658,261	5,697	138,556	457,392	1,155,440	15,322,544
1971	12,357,868	108,669	1,660,223	5,762	144,157	449,802	1,033,150	15,759,631
1972	13,022,764	106,957	1,686,158	5,962	147,416	436,660	1,075,770	16,481,687
1973	13,815,000	108,880	1,766,430	4,750	156,980	438,640	1,122,820	17,413,500
1974	13,947,934	108,884	1,800,650	5,696	177,165	441,001	1,154,461	17,635,791
1975	14,060,973	113,964	1,813,075	6,977	183,381	424,889	1,281,576	17,884,835
1976	14,372,834	115,392	1,796,281	7,211	180,773	414,365	1,347,100	18,233,956
1978	14,416,989	112,206	1,742,528	7,475	254,343	407,530	1,314,816	18,255,887
1979	14,926,571	112,781	1,820,051	7,555	381,010	412,654	1,405,435	19,066,057
1980	15,437,733	112,502	1,800,335	7,176	408,732	406,597	1,479,505	19,652,580
1981	15,632,683	112,234	1,770,489	6,888	423,446	372,624	1,473,811	19,792,175

Notes:

The data contained in this table was obtained from a sample count, every tenth vehicle holding a CURRENT LICENCE, during the last quarter of September each year for the years 1946-1976. No sample data was collected for 1977. From 1978 a complete census was conducted on 31 December from Great Britain. Northern Ireland still continued with a sample count.

Source: SMMT (1939, 1991)

TABLE A7

SUMMARY OF NEW REGISTRATIONS OF MOTOR VEHICLES, 1946-91

	Private & Light Goods	Taxis, Buses & Coaches	Goods	General Haulage Tractors	Exempt Vehicles	Agricultural Tractors	Motor Cycles	Total
1946	121,725	4,045	102,680	608	18,654	24,844	75,727	348,283
1947	147,767	7,847	123,759	930	19,733	47,016	64,754	411,806
1948	112,666	10,096	107,554	805	15,247	54,555	74,167	375,090
1949	154,694	12,577	109,815	582	12,147	44,432	90,956	425,203
1950	134,394	11,486	93,886	525	10,581	41,108	135,045	427,025
1951	138,373	7,881	86,801	478	13,389	36,174	139,076	422,172
1952	191,037	5,432	83,916	510	12,631	34,092	137,208	464,826
1953	301,354	5,129	99,521	492	10,915	35,183	143,640	596,234
1954	394,362	5,593	112,152	591	12,359	36,975	172,373	734,405
1955	511,420	5,639	156,889	568	15,348	40,984	195,289	926,137
1956	407,342	5,183	151,229	543	18,274	33,292	150,228	766,091
1957	433,171	5,130	143,989	533	12,835	41,537	216,699	853,894
1958	566,319	4,986	176,615	593	10,225	49,559	193,929	1,002,226
1959	657,315	5,128	196,450	709	11,532	51,322	355,615	1,278,071
1960	820,088	6,445	231,332	644	15,851	44,834	278,395	1,397,589
1961	756,054	6,184	226,390	600	18,794	48,692	227,766	1,284,480
1962	800,239	5,614	197,981	556	15,959	44,908	152,435	1,217,692
1963	1,030,694	6,531	211,603	666	22,672	50,115	175,544	1,497,825
1964	1,215,929	6,615	234,703	890	23,247	48,032	217,626	1,747,042
1965	1,148,718	6,888	234,785	692	33,213	46,803	164,952	1,636,051
1966	1,091,217	6,846	232,136	917	25,935	49,844	120,472	1,527,367
1967	1,143,015	6,672	226,423	809	28,869	55,732	148,856	1,610,376
1968	1,144,770	7,111	236,401	798	25,630	59,464	124,445	1,598,619
1969	1,012,811	7,251	244,735	823	21,133	51,445	98,082	1,436,280
1970	1,126,824	7,828	241,481	819	16,360	51,032	119,526	1,563,870
1971	1,334,685	9,722	239,811	734	16,457	39,414	142,672	1,783,495
1972	1,702,211	10,012	272,713	814	30,287	49,152	167,763	2,232,952
1973	1,688,322	10,121	294,847	719	31,384	51,384	207,683	2,284,460
1974	1,273,814	8,055	238,690	590	27,974	47,225	204,245	1,800,593
1975	1,211,658	8,024	222,935	861	32,825	50,347	280,969	1,807,619
1976	1,307,873	8,901	215,671	699	32,186	54,341	284,984	1,904,655
1977	1,335,311	9,008	235,335	635	33,338	51,509	262,876	1,928,012
1978	1,618,193	9,282	270,889	719	35,444	52,608	235,494	2,222,629
1979	1,731,882	9,258	314,190	744	39,434	49,896	294,628	2,440,032
1980	1,536,243	8,935	271,132	633	39,830	38,146	320,526	2,215,445
1981	1,513,875	7,650	218,705	425	32,398	33,796	278,383	2,085,232
1982	1,639,121	7,203	207,915	443	36,878	40,215	238,106	2,169,881
1983	1,870,556	7,544	235,661	570	45,339	44,012	180,480	2,384,162
1984	1,827,883	7,466	230,663	451	62,088	42,223	150,924	2,321,698

	Private & Light Goods	Taxis, Buses & Coaches	Goods	General Haulage Tractors	Exempt Vehicles	Agricultural Tractors	Motor Cycles	Total
1985	1,908,704	7,146	246,960	426	53,692	42,637	130,685	2,390,250
1986	1,943,745	9,210	245,418	416	59,780	36,340	110,859	2,405,768
1987	2,078,711	8,975	257,115	385	68,773	39,107	94,463	2,547,529
1988	2,277,306	9,468	297,290	404	72,004	46,905	100,118	2,803,495
1989	2,373,391	8,359	302,033	258	80,887	44,351	102,059	2,911,338
1990	2,076,051	7,724	226,259	154	78,740	35,848	98,797	2,523,573
1991	1,665,779	5,548	144,266	66	78,165	27,271	79,432	2,000,527

Source: SMMT (1939, 1991, 1993)

TABLE A8

ANALYSIS OF MOTOR VEHICLE EXPORTS AS PERCENTAGE OF UK TOTAL EXPORTS, 1952-77

Year	Motor Industry as Percentage of UK Exports	Car Industry as Percentage of UK Exports	CVs as Percentage of UK Exports	Components as percentage of UK Exports
1952	12.7	4.3	5.1	3.3
1953	11.7	4.1	4.2	3.4
1954	12.8	4.6	4.6	3.6
1955	13.4	4.5	4.8	4.1
1956	12.6	3.8	4.9	3.9
1957	13.5	4.8	4.8	3.9
1958	14.7	5.8	4.5	4.4
1959	15.9	6.5	4.8	4.6
1960	16.9	6.2	5.5	5.2
1961	15.1	3.9	5.9	5.3
1962	16.5	5.5	5.8	5.2
1963	16.7	5.6	5.9	5.2
1964	16.8	5.8	5.6	5.4
1965	16.6	5.3	5.4	5.9
1966	15.9	4.6	5.4	5.9
1967	14.6	4.2	4.6	5.8
1968	14.5	4.5	4.2	5.8
1969	15.3	4.9	4.7	5.7
1970	14.4	4.1	4.4	5.9
1971	14.8	4	4.6	6.2
1972	13.5	3.4	3.9	6.2
1973	12.6	3	3.7	5.9
1974	11.4	3.2	3.4	4.8
1975	13.1	2.4	4.5	5.2
1976	12.7	2.5	4.3	5.9
1977	11.4	2.3	4.1	6

Source: Dunnett (1980, p.162)

TABLE A9

BRITISH MOTOR INDUSTRY TRADE STATISTICS (current prices)

	EXPORTS						IMPORTS						TRADE BALANCE	
	Cars		CVs		Total Vehicles	Total Value	Cars		CVs		Total Vehicles	Total Value	Trade Balance	Trade Balance
-	No.	-£000's	No.	-£000's	No.	-£000's	No.	-£000's	No.	-£000's	No.	-£000's	No.	-£000's
1948	224,374	59,356	73,996	36,263	298,370	95,619	221	108	173	106	394	214	297,976	95,405
1949	257,250	72,505	92,737	42,032	349,987	114,537	1,868	580	880	317	2,748	897	347,239	113,640
1950	397,688	116,268	144,251	61,590	541,939	177,858	1,375	359	193	94	1,568	453	540,371	177,405
1951	368,101	118,802	136,880	69,080	504,981	187,882	3,723	1,134	237	90	3,960	1224	501,021	186,658
1952	308,942	110,795	128,203	77,831	437,145	188,626	1,876	713	102	97	1,978	810	435,167	187,816
1953	307,368	106,045	104,696	60,417	412,064	166,462	2,067	760	49	52	2,116	812	409,948	165,650
1954	372,029	120,945	118,796	65,859	490,825	186,804	4,660	1,580	684	332	5,344	1,912	485,481	184,892
1955	388,564	127,816	104,048	80,498	492,612	208,314	11,131	4,053	989	622	12,120	4,675	480,492	203,639
1956	335,397	119,886	126,671	86,145	462,068	206,031	6,885	2,344	791	638	7,676	2,982	454,392	203,049
1957	424,320	157,023	122,957	86,932	547,277	243,955	8,828	3,055	1,129	740	9,957	3,795	537,320	240,160
1958	484,034	187,169	112,205	81,725	596,239	268,894	10,940	3,926	1,205	581	12,145	4,507	584,094	264,387
1959	568,971	222,532	128,055	88,968	697,026	311,500	26,998	8,900	1,248	622	28,246	9,522	668,780	301,978
1960	569,889	224,634	146,128	104,468	716,017	329,102	57,309	19,101	2,919	1,463	60,228	20,564	655,789	308,538
1961	370,744	147,874	167,931	121,932	538,675	269,806	22,759	8,510	3,649	1,955	26,408	10,465	512,267	259,341
1962	544,924	215,474	149,870	114,011	694,794	329,485	28,610	10,680	4,488	1,931	33,098	12,611	661,696	316,874
1963	615,827	237,205	159,007	121,393	774,834	358,598	48,163	18,768	2,924	2,157	51,087	20,925	723,747	337,673
1964	679,383	256,709	168,606	126,529	847,989	383,238	65,725	27,139	3,970	2,212	69,695	29,351	778,294	353,887
1965	627,567	250,859	166,189	137,124	793,756	387,983	55,558	22,986	2,392	1,830	57,950	24,816	735,806	363,167
1966	556,044	234,356	165,924	142,056	721,968	376,412	66,793	26,567	2,683	2,957	69,476	29,524	652,492	346,888
1967	502,596	211,413	135,188	116,769	637,784	328,182	92,731	39,144	3,827	5,141	96,558	44,285	541,226	283,897
1968	676,571	280,100	142,036	124,942	818,607	405,042	102,276	49,328	3,903	5,877	106,179	55,205	712,428	349,837

	EXPORTS						IMPORTS						TRADE BALANCE	
	Cars		CVs		Total Vehicles	Total Value	Cars		CVs		Total Vehicles	Total Value	Trade Balance	Trade Balance
-	No.	-£000's	No.	-£000's	No.	-£000's	No.	-£000's	No.	-£000's	No.	-£000's	No.	-£000's
1969	771,634	340,939	181,152	168,526	952,786	509,465	101,914	53,495	5,517	7,452	107,431	60,947	845,355	448,518
1970	690,339	327,711	172,387	179,612	862,726	507,323	157,956	85,006	10,317	13,389	168,273	98,395	694,453	408,928
1971	721,094	368,843	194,747	225,892	915,841	594,735	281,037	171,465	18,575	20,855	299,612	192,320	616,229	402,415
1972	627,479	329,879	139,932	175,168	767,411	505,047	450,314	324,406	34,885	38,899	485,199	363,305	282,212	141,742
1973	598,816	372,818	163,148	214,014	761,964	586,832	504,619	436,900	36,870	53,729	541,489	490,629	220,475	96,203
1974	564,790	418,502	160,722	250,082	725,512	668,584	375,421	355,005	39,589	91,141	415,010	446,146	310,502	222,438
1975	516,219	483,260	179,633	428,634	695,852	911,894	448,749	514,047	25,563	90,099	474,312	604,146	221,540	307,748
1976	495,796	633,230	188,103	548,204	683,899	1,181,434	533,901	886,397	27,368	122,725	561,269	1,009,122	122,630	172,312
1977	474,826	751,926	191,887	652,680	666,713	1,404,606	698,464	1,323,878	36,874	211,161	735,338	1,535,039	-68,625	-130,433
1978	466,382	923,584	141,992	553,651	608,374	1,477,235	800,772	1,764,681	46,557	260,545	847,329	2,025,226	-238,955	-547,991
1979	410,118	817,010	140,838	618,500	550,956	1,435,510	1,060,645	2,581,581	67,604	372,379	1,128,249	2,953,960	-577,293	-1,518,450
1980	359,145	819,242	121,882	624,854	481,027	1,444,096	863,080	2,097,620	73,730	360,196	936,810	2,457,816	-455,783	-1,013,720
1981	349,359	887,196	91,733	579,275	441,092	1,466,471	805,327	2,211,387	46,732	225,854	852,059	2,437,241	-410,967	-970,770
1982	313,025	932,148	90,850	517,510	403,875	1,449,658	934,141	2,876,400	71,471	416,240	1,005,612	3,292,640	-601,737	-1,842,982
1983	273,616	958,935	91,667	438,401	365,283	1,397,336	1,075,834	3,648,916	97,252	575,216	1,173,086	4,224,132	-807,803	-2,826,796
1984	219,172	997,725	76,502	389,066	295,674	1,386,791	1,020,494	3,662,207	102,927	659,830	1,123,421	4,322,037	-827,747	-2,935,246
1985	240,247	1,274,309	51,502	409,326	291,749	1,683,635	1,071.892	4,153,765	106,145	735,355	1,178,037	4,889,120	-886,288	-3,205,485
1986	201,411	1,311,991	44,215	332,266	245,626	1,644,257	1,071,747	4,791,699	122,433	848,118	1,194,180	5,639,817	-948,554	-3,995,560
1987	244,746	1,900,718	54,815	388,031	299,561	2,288,749	1,047,413	4,994,895	108,709	901,611	1,156,122	5,896,506	-856,561	-3,607,757
1988	261,146	1,950,192	70,716	463,458	331,862	2,413,650	1,356,902	6,698,536	145447	1,293,250	1,502,349	7,991,786	-1,170,487	-5,578,136
1989	339,006	2,477,403	92,272	563,683	431,278	3,041,086	1,370,589	7,485,081	147,004	1,491,657	1,517,593	8,976,738	-1,086,315	-5,935,652
1990	414,105	3,093,287	96,221	712,532	510,326	3,805,819	1,190,420	7,268,310	89,436	92,7181	1,279,856	8,195,491	-769,530	-4,389,672

Source: SMMT (1939, 1991, 1993)

TABLE A10

PERCENTAGE OF MOTOR INDUSTRY OUTPUT EXPORTED, 1946-68

Year	Cars	CVs
1946	38	31
1949	62	38
1952	60	53
1955	42	47
1958	46	35
1960	42	32
1962	44	35
1964	36	36
1966	35	38
1968	37	35

Source: Rhys (1972)

TABLE A11
IMPORT PENETRATION - PASSENGER CARS (% OF NEW REGISTRATIONS)

Year	New Car Registrations	Car Imports	Import Penetration (%)
1948	110,634	221	0.20
1949	151,928	1,868	1.23
1950	132,273	1,375	1.04
1951	136,188	3,723	2.73
1952	187,616	1,876	1.00
1953	295,073	2,067	0.70
1954	386,386	4,660	1.21
1955	500,857	11,131	2.22
1956	399,675	6,885	1.72
1957	425,355	8,828	2.08
1958	555,297	10,940	1.97
1959	645,617	26,998	4.18
1960	805,017	57,309	7.12
1961	742,803	22,759	3.06
1962	784,734	28,610	3.65
1963	1,008,608	48,163	4.78
1964	1,190,569	65,725	5.52
1965	1,122,476	55,558	4.95
1966	1,065,422	66,793	6.27
1967	1,116,702	92,731	8.30
1968	1,116,894	102,276	9.16
1969	988,451	101,914	10.31
1970	1,097,214	157,956	14.40
1971	1,301,665	281,037	21.59
1972	1,662,853	450,314	27.08
1973	1,645,555	504,619	30.67
1974	1,234,016	375,421	30.42
1975	1,166,795	448,749	38.46
1976	1,255,847	533,901	42.51
1977	1,285,018	698,464	54.35
1978	1,561,460	800,772	51.28
1979	1,675,829	1,060,645	63.29
1980	1,489,015	863,080	57.96
1981	1,469,448	805,327	54.80
1982	1,584,238	934,141	58.96
1983	1,806,052	1,075,834	59.57
1984	1,759,256	1,020,494	58.01
1985	1,842,075	1,071,892	58.19
1986	1,883,154	1,071,747	56.91
1987	2,016,231	1,047,413	51.95
1988	2,210,309	1,356,902	61.39
1989	2,304,405	1,370,589	59.48
1990	2,005,106	1,190,420	59.37

Source: calculated from SMMT (1993)

TABLE A12
PRE-TAX PROFITS (LOSS) IN UK MOTOR INDUSTRY, 1945-77
(£m, current prices)

Fiscal Year	Austin	Morris	Standard	Rootes/ Chrysler	Vauxhall	Ford
	BMC					
	BLMC					
1945	0.9	1.9	0.3	1.5	2.1	1.4
1946	1	3	0.3	-0.4	1.5	3.2
1947	1.8	2.6	0.3	0.6	2	3.9
1948	1.1	1.5	0.9	1.2	2	5.5
1949	1.6	2.6	1.2	1.1	2.7	5.1
1950	5.2	7.1	1.3	2.8	2.7	9.7
1951	7.2	8.7	2.3	3.4	2.7	9.8
1952	5.2		1.6	3.4	5.3	9.6
1953	12.3		1.6	2.2	9.9	15.7
1954	17.9		2.2	3.5	12.4	19
1955	20.3		3.3	3.3	10.8	18.1
1956	11.7		0.8	1.7	6.4	10
1957	7.8		0.8	-0.6	-2.3	20.1
1958	21			3.4	1.1	24.7
1959	15.7			3.9	13.5	32.2
1960	26.9			4.4	14.1	33.7
1961	10.1			2.9	14.5	22.2
1962	4.2			-0.9	16	17
1963	15.4			-0.3	16.3	35
1964	21.8			-0.2	17.9	24
1965	50			-2.5	17.7	8.9
1966	44			-3.4	3.6	7.4
1967	16			-10.8	5.7	2.6
1968	38			-3.7	9	43
1969	40			-0.7	-1.9	38.1
1970	4			-10.7	-9.7	25.2
1971	32			0.4	1.8	-30.7
1972	32			1.6	-4.3	46.8
1973	51			3.7	-4.1	65.4
1974	2.3			-17.7	-18.1	8.7
1975	-23.6			-35.5	-2.5	40.8
1976	-112.4*			-31.9	7.4	140.2
1977	72.5			-8.2	5.2	263.1

Notes:
From 1957, Standard becomes part of Leyland
*1976 losses relate to 15 month period

Source: Dunnett (1980, p.39)

Manuscript References

Conservative Party Archives

CPA (1959) CRD 3/13/1. Eccles to Macmillan, May 1959

Modern Record Centre

FBI denotes Federation of British Industry

BMIHT denotes British Motor Industry Heritage Trust, Standard Triumph Motors

MRC (1945a) FBI MSS 200/F/1/1/188. Grand Council Minutes. 14 Mar. 1945

MRC (1945-50b) FBI MSS 200/F/1/1/188-190.

MRC (1946) BMIHT MSS 226/ST/3/F/2/44. Cost analysis. 5 April 1948

MRC (1947) FBI MSS200/F/1/1/163. Minutes of the location of industry committee. 30 Sept 1947

MRC (1948) BMIHT MSS 226/ST/F/5/29. Ferguson to Cripps. 5 April 1948

MRC (1949) FBI MSS 200/F/1/1/163. Minutes of the location of industry sub-committee. 20 May 1948

MRC (1950a) FBI MSS 200/F/1/1/164. Minutes of the location of industry sub-committee. 17 Jan. 1950

MRC (1950-1960b) FBI MSS 200/F3/T3/6/1-11.

MRC (1951-56a) BMIHT MSS 226/SR/LI/1/1. Liverpool project, 1950-54

MRC (1951b) BMIHT MSS 226/SR/LI/1/1. Managing director's confidential memorandum. 3 July 1951

MRC (1951-56c) BMIHT MSS 226/ST/3/AV/1-12. Avon engine project

MRC (1951d) BMIHT MSS 226/ST/3/AV/4. Memo, company secretary to Sir John Black. 9 July. 1951

MRC (1951e) FBI MSS 200/F/3/T3/6/11. Johnstone to Eadie, 21 Jan. 1951

MRC (1952) MSS 226/St/3/A/Pri/1. Standard Pricing Policy

MRC (1954) BMIHT MSS 226/ST/3/Av/1-1. Minister of Supply to Standard Motors. 15 July 1954

MRC (1955a) BMIHT MSS 226/ST/3/AV/7. Beesly (Ministry of Supply) to Dick. 18 July 1955

MRC (1955-56b) FBI MSS 200/F/3/T3/6/11. Location of industry, physical factors in relation to the choice of location, development area and IDC policy

MRC (1955c) FBI MSS 200/F/3/T3/6/11. Board of Trade to Gough. 14 Mar. 1955

MRC (1956a) FBI MSS 200/F/3/T3/6/11. Draft letter from Davies to members of the location of industry committee, 13 Jan. 1956

MRC (1956b) MSS FBI 200/F/3/T3/6/11. Extract from Eastern Regional Board for Industry, 2 Nov. 1956

MRC (1957a) FBI MSS 200/F/3/T3/6/11. Johnstone to Eadie, 21 Jan. 1957

MRC (1957b) FBI MSS 200/F/3/T3/6/11. Eadie to Davies, 4 April, 1957 (presents a summary of a Southwest Regional Board for Industry Council meeting on 1 April 1957)

MRC (1959a) BMIHT MSS 226/ST/3/LI/3. Standard Triumph group development plans

MRC (1959b) BMIHT MSS 226/ST/3/LI/3. Liverpool development plan, profit estimate

MRC (1960a) BMIHT MSS 226/ST/1/1/14. Standard Motors board minutes, 5 Dec. 1960

MRC (1960b) BMIHT MSS 226/ST/1/1/14. Standard Motors board minutes, 20 Dec. 1960

MRC (1960-63c) BMIHT MSS 226/ST3/LI/1/6. Board of Trade, Liverpool file

MRC (1960d) FBI MSS 200/F/S/T3/6/9. The Local Unemployment Act, Hall to Whitehorn, Mar. 1960

MRC (1960e) BMIHT MSS 226/ST3/LI/1/6 Standard Triumph, estimate costs of Liverpool development plan, Feb. 1960

MRC (1962a) BMIHT MSS 226/ST/1/1/14. Standard Motors board minutes, 17 May 1962

MRC (1962b) BMIHT MSS 226/ST3/LI/1/6. Elwood to Constantine, 16 May 1962

Public Record Office

PRO (1943a) CAB 124/221. Peat to Jowett, 18 Dec. 1943

PRO (1943b) CAB 87/15 EC(43)21. Memorandum by the Ministry of Supply. 6 Nov. 1943

PRO (1943c) CAB 87/5 EC(43)18. Memorandum by the Ministry of Town and Country Planning. 2 Nov 1943

PRO (1943d) CAB 87/63 EC43(13). Location of industry, note by the Economic Section, 20 Oct. 1943

PRO (1943e) CAB 87/63 EC43(21). Location of industry, note by the Ministry of Supply. 6 Nov. 1943

PRO (1943f) CAB 87/63 EC43(23rd). 16 Nov. 1943

PRO (1943g) CAB 87/63 R(43)1. The mobility of labour and structural unemployment, memorandum by the Minister of Labour, 15 Oct. 1943

PRO (1943-44h) LAB 8/2411. Excerpts from minutes and letters by Ernest Bevin, Sir Thomas Phillips, Sir Godfrey Ince, Sir G. Myrddin-Evans, on the Draft White Paper on Employment. Dated various 1943-44

PRO (1944a) CAB 66/51. Memorandum by the Minister of Economic Warfare. June. 1944

PRO (1944b) CAB 87/5 R(44)11th. 28 Jan. 1944

PRO (1944c) CAB 87/7 R(44)6. Postwar employment, note by the Minister of Reconstruction, 11 Jan 1944

PRO (1944d) CAB 87/8 R(44)72. The balanced distribution of industry, memorandum by the Minister of Town and Country Planning. 7 April 1944

PRO (1944e) CAB 124/662. Memorandum from Professor Jewkes, 16 Oct. 1946

PRO (1945-50) LAB 8/2081. Various

PRO (1946a) BT 177/71. Distribution of industry policy in Scotland, Fraser to Rees. 3 Oct. 1946

PRO (1946b) BT 177/71. Fraser to Rees, 3 Oct. 1946

PRO (1946c) CAB 124/646 BDI(A)31/6. 4 Feb. 1946

PRO (1946d) CAB 124/658 BDI(A). Case #1207, 9 Sept. 1946

PRO (1946e) CAB 124/658 BDI(A). Case #1261. 28 Oct. 1946

PRO (1946f) CAB 124/676. Unsigned letter, Scottish Office to Lord President. 18 June. 1946

PRO (1946g) CAB 124/677. Johnston to Wilson, 4 Dec. 1946

PRO (1946h) CAB 1244/646 Panel A, 42nd meeting. The industrial development of Oxford. 12 Feb. 1946

PRO (1946i) CAB 87/7 R(44)23. Location of industry, memorandum by the Secretary, Department of Overseas Trade. 27 Jan. 1946

PRO (1946j) LAB 8/2081. Woods to Ince. 15 Nov. 1946

PRO (1946k) PRO CAB 124/645. Interdepartmental Committee on the Balanced Distribution of Industry, Panel A, Principles to be applied in considering building projects. Jan. 1946

PRO (1947a) CAB 124/649. Minutes and memoranda. Oct. 1946 to Jan. 1947

PRO (1947b) LAB 8/2081. Economic research into the problems of the distribution of industry, note by the Board of Trade

PRO (1947c) LAB 8/2081 CC(47)1st. Clay Committee, minutes of first meeting. 25 July 1947

PRO (1948a) BT 177/205. Shackle to Hall. 11 Sept. 1948

PRO (1948b) BT 177/214. Location literature

PRO (1948c) CAB 134/130 DI(48). 24 July 1948

PRO (1948d) CAB 134/130 DI(48)35. 10 Dec. 1948

PRO (1948e) CAB 134/636 PC(28)21st:3. 29. Oct 1948

PRO (1949a) BT 177/176. Kipping to Helmore. 25 May 1949

PRO (1949b) BT 177/214. Factors affecting location in recent years, report by H.S. Phillips. 30 Nov. 1949

PRO (1949c) BT 177/214. Factors influencing the location of firms in the Southern region, Board of Trade Survey, Sept. 1949

PRO (1949d) BT 177/440. Minutes of the first meeting of the Parliamentary Secretary's study group on distribution of industry policy. 26 July 1949

PRO (1949e) CAB 134/131 DI(49)2nd:1. 8 Mar. 1949

PRO (1949f) CAB 134/131 DI(49)8. Ford Motor Company's proposals for expansion, note by the Parliamentary Secretary to the Board of Trade, annex C. 4 Mar. 1949

PRO (1949g) CAB 134/131 PC(49)105. Distribution of industry amending bill, memorandum by the President of the Board of Trade. 30 Sept. 1949

PRO (1949h) CAB 134/342 PC(49)105. Distribution of industry amending bill, memorandum by the President of the Board of Trade. 30 Sept. 1949

PRO (1950a) BT 177/278. Ad hoc meeting to discuss open favoritism for dollar earning firms. 25 May 1950

PRO (1950b) BT 177/505. Extracts from minutes of regional controllers conferences. 14 Dec 1950

PRO (1950c) BT 177/535. Minutes of regional controllers conference. 12 April 1950

PRO (1950d) CAB 134/646 PC(50)41. Factory building in the unemployment areas, memorandum by the President of the Board of Trade. 3 May, 1950

PRO (1951a) BT 177/353. Minutes of Midland regional balanced distribution of industry panel, 122nd meeting. 27 July 1951

PRO (1951b) BT 177/388. Report of the working party on the labour position in the Coventry area. Aug. 1951

PRO (1951c) BT 177/58. Douglas-Campbell to Hyman. 29 Dec. 1951

PRO (1951d) BT 177/587. Review of development area policy. 1951

PRO (1951e) BT 177/587. Minutes of meeting, 3 Dec. 1951

PRO (1951f) BT 177/600. Cairncross Committee, terms of reference, 27 June 1951

PRO (1951g) LAB 8/2081 CC(51)2. Industrial efficiency and its measurement with special reference to inter-plant comparisons of efficiency

PRO (1951h) LAB 8/2081 CC51(2). NIESR, co-ordination of research into industrial location. Jan. 1951

PRO (1951i) T229/582. Report of the working party on the labour position in the Coventry area, para 17. Aug. 1951

PRO (1952a) BT 177/1332. Distribution of industry policy; an informal note on possible alternatives by J. Ilet. 17 July 1952

PRO (1952b) BT 177/305. Memorandum addressed to regional controllers, unsigned. 1952

PRO (1952c) BT 177/307. Ince to Lee, 6 Feb. 1952

PRO (1952d) BT 177/500. Walker to Craig. 30 April, 1952

PRO (1952e) BT 177/607. Skeleton notes on development area policy. 1952

PRO (1952f) LAB 8/2081 CC51(17th). Clay Committee, minutes of seventeenth meeting. 18 Nov. 1952

PRO (1953-54a) BT 177/1406. Ford Motor Company, allocation of factory at Langley, general factory space requirements and allocation of Woolwich Arsenal

PRO (1953b) BT 177/1708. Working party on contracts in development areas and unemployment areas, Oliver to Robertson. 10 July. 1953

PRO (1953c) BT 177/305. Letter addressed to Figgures. Feb. 1953

PRO (1953d) BT 177/305. Note of a meeting held at the Treasury, 21 Mar. 1953

PRO (1953e) BT 177/535. Minute sheet, 27 April 1953

PRO (1953f) BT 177/600. Jay to Thorneycroft, 26 Feb. 1953

PRO (1953g) LAB 8/2410. The future of industrial development certificate policy. Aug. 1953

PRO (1953h) LAB 8/2410. The future of industrial development certificate policy. Aug. 1953. para 8

PRO (1953i) LAB8/2410. The future of industrial development certificate policy. Aug. 1953. para 14

PRO (1954a) 14/336. Rootes proposal to expand in the Luton & Dunstable areas

PRO (1954b) BT 177/1479. Ford and Vauxhall expansion plans (policy on refusal of IDC applications)

PRO (1954c) BT 177/1479. Industrial location, application for IDCs by Ford and Vauxhall, notes for the President. July, 1954

PRO (1954d) BT 177/1479. Lee to Crookshanks. 4 June, 1954

PRO (1954e) BT 177/1479. Low to Strauss. 15 June, 1954

PRO (1954f) BT 177/1479. Industrial location, applications for IDCs by Ford and Vauxhall, notes for the President. Undated, but believed to be July-Aug, 1954

PRO (1954g) BT 177/1479. Note of a meeting with Sir Roland Smith, Sir Patrick Hennessy and Mr. Thatcher of Ford. 27 July 1954

PRO (1954h) BT 177/1479. Note of a meeting with Vauxhall Motors, 29 July, 1954

PRO (1954i) BT 177/1479. Minutes of meeting between the President, Parliamentary Secretary, Sir Henry Gregory, Alix Gilroy (Meynell) and Caplan. 15 July 1954

PRO (1954j) BT 177/1479. Minutes of meeting to discuss Rootes expansion plans for Dunstable. 11 Nov. 1954

PRO (1954k) BT 177/1479. Meetings of ministers to discuss Rootes project. 1 Dec. 1954

PRO (1954l) BT 177/1479. Memorandum by the President of the Board of Trade, re expansion of the motor industry. 21 Dec. 1954

PRO (1954m) BT 177/1479. Memorandum by the Minister of Labour and National Service re expansion of the Rootes Group. 21 Dec. 1954

PRO (1954n) BT 177/1481. Select Committee on Estimates, session 1954-55, financial assistance in Development Areas

PRO (1954o) CAB 134/850. Economic Policy Committee, minutes of meetings, 16 Dec. 1954

PRO (1954p) CAB 134/850. Economic Policy Committee, minutes of meeting, 16 Dec. 1954

PRO (1954q) LAB 8/2411. Distribution of industry, memorandum proposing the transfer of the main responsibility from the Board of Trade to the Ministry of Labour. Undated, but believed to be late 1954

PRO (1954?-r) SUPP 14/336. IDCs and local planning approval, para3. Undated

PRO (1954s) SUPP 14/336. Note by MA Cross, 2 Dec. 1954

PRO (1954t) SUPP 14/336. W. Rootes to Thorneycroft. 30 Nov. 1954

PRO (1954u) SUPP 14/336. Roberts to Cullen 20 Oct. 1954

PRO (1954v) SUPP 14/336. Sandys to Thorneycroft, 25 Nov. 1954

PRO (1955a) BT 177/1482. Note of the Select Committee on Estimates visit to South Wales, 31 Mar. 1955

PRO (1955b) BT 177/1592. Regional controllers conference, Dec. 1955

PRO (1955c) BT 177/621. Minutes of Board of Trade and Ministry of Supply regional controllers' conference, 11 May 1955

PRO (1956) BT 177/1786. Note of a discussion between Fish, Levine and the Parliamentary Secretary, 2 June 1956

PRO (1957a) BT 177/1456. Distribution of Industry in the United Kingdom, policy and practice, a report to SVIMEZ by Alix Meynell DBE, Under-Secretary at the Board of Trade (The Meynell Report). Feb. 1957

PRO (1957b) BT 177/1786. Notes on a tougher location policy, 10 April, 1957

PRO (1958) BT 177/1786. Local unemployment, notes on the possibilities of a more rigorous IDC policy, 5 June, 1958

PRO (1959a) BT 177/1596. Regional controllers conference, 8-9 July, 1959

PRO (1959b) BT 177/1815. Andrew to Fraser, 11 June 1959

PRO (1959c) BT 177/1815. Minute of a meeting at Board of Trade headquarters, 8 June 1959

PRO (1959d) BT 177/1815. Minute of a visit to Scotland by Mr. Wendle, Mr. Clem and Mr. Kingsley of Chrysler, 8 July 1959

PRO (1959e) BT 177/1815. Mackay to Eccles, 17 July 1959

PRO (1959f) BT 177/1817. Note of a meeting between Newberg, Townsend, Kingsley, Wendell-Clough and Clem (Chrysler), 16 July 1959

PRO (1959g) CAB 134/1624 DI(59)2. Chrylser Motors Limited, proposals for assembly and production in Great Britain, 13 Nov. 1959

PRO (1959h) CAB 134/1624 DI(59)2nd. 17 Dec. 1959

PRO (1960a) BT 177/1790. BOTAC minutes, 12 Oct. 1960

PRO (1960b) BT 177/1791. Johnston to Welch, 5 Feb. 1960

PRO (1960c) BT 177/1791. Johnson to Welch, 2 Feb. 1960

PRO (1960d) BT 177/1960. Local Employment Act, section 4 assistance

PRO (1960e) BT 177/2015. Assistance provided under sections 4 and 27 of the Local Unemployment Act 1960, April-Sept. 1960

PRO (1960f) CAB 134/1621 DI(60)1. Ford expansion plans, 6 Jan. 1960

PRO (1960g) CAB 134/1624 DI(60)1. Motor industry expansion plans, 6 Jan. 1960

PRO (1960h) CAB 134/1624 DI(60)1. 6 Jan. 1960

PRO (1960i) CAB 134/1624 DI(60)4. Distribution of Industry Committee, expansion proposals for the Rover Car Company, 2 Feb. 1960

PRO (1960j) CAB 134/1624 DI(60)4. Expansion plans for the Rover Motor Company, 22 Feb. 1960

PRO (1960k) CAB 134/1624 DI(60)5. Distribution of Industry Committee, expansion of the Pressed Steel Company Limited, 22 Feb. 1960

PRO (1960l) CAB 134/1629 DI(60)6. 22 Feb. 1960

PRO (1960m) T291/44 CPE4. Committee on the control of public expenditure, note by Sir Frank Lee on some aspects of Treasury control of Board of Trade expenditure, Mar. 1960

PRO (1961a) BT 177/1795. Steering committee on the Toothill Report - draft report for ministerial committee

PRO (1961b) BT 177/1966. Welch to Whitehouse, 19 Nov. 1961

PRO (1962a) BT 177/1599. Regional controllers conference, 12 July 1962

PRO (1962b) BT 177/2030. Plans of 87 firms whose IDCs were rejected between 1 July 1958 and 30 June 1962

PRO (1962c) BT 177/2089. Memorandum prepared by Fisher, 20 Feb. 1962

PRO (1962d) BT 177/1812 Applications for financial assistance under the Distribution of Industry (Industrial Finance) Act

PRO (1962e) BT 177/1950. Darragh to Levine, 15 June, 1962

PRO (1963a) BT 177/2039. Davies to Fisher, 19 Feb. 1963

PRO (1963b) BT 177/2089. Development districts - an opportunity for management, transcript of speech delivered to the British Institute of Management Conference, 16 Oct. 1963

PRO (1963c) CAB 134//1097 EA(63)8th. 14 Nov. 1963

PRO (1964a) BT 177/2089. Minutes and memoranda of the Working Party on the Distribution of Industry

PRO (1964b) Lab 21/164. Draft Note on the new motor firms in Scotland. Undated

PRO (1964c) LAB 21/164. Rootes (Scotland) Limited - Report of the Recruitment of Labour Upto 21 December 1964. Feb. 1965

PRO (1964d) LAB 21/164. Labour Problems in Development Districts - BMC (Scotland) Bathgate

PRO (1964e) LAB 21/164. Wilson to Barnes, 19 June 1964

PRO (1964f) LAB 21/164. Pay schemes in the new motor industry plants

PRO (1964g) LAB 21/164. Labour problems in Development Districts, memorandum by the Ministry of Labour, 9 June 1964

PRO (1964h) LAB 21/164. Diak to Morgan, 9 Sept. 1964

PRO (1964i) LAB 21/164. Labour problems in Development Districts, Report on Rootes (Scotland Limited), Linwood. May 1964

PRO (1964j) LAB 21/164. Whitehouse to Diak, notes of meetings with Rootes and BMC, 9 June 1964

PRO (1967) BT177/1950. Vauxhall Motors Limited, Ellesmere Port, Schedule of grants paid under Local Employment Acts, 1960 and 1963. Aug. 1967

Scottish Record Office

SRO (1946-1960) SEP 4/3505. Chrysler, previously Rootes (Pressed Steel Limited)

SRO (1954) SEP 004/3504. Note by Young, 3 Dec. 1954

SRO (1959a) SEP 003/1725. Maclean to Jack, 18 Mar. 1959

SRO (1959b) SEP 004/1590. Minute of a meeting between the President of the Board of Trade, Secretary of State for Scotland and representatives of the Scottish TUC, 4 Dec. 1959

SRO (1959c) SEP 004/1590. Local Employment Bill, direction to BOTAC from the Scottish Office, Nov. 1959

SRO (1959d) SEP 004/1658. Distribution of Industry Committee, notes for the Secretary of State for Scotland, 1959

SRO (1959e) SEP 004/1658. Minutes of Scottish Council (Development and Industry), 21 Dec. 1959

SRO (1959f) SEP 004/1658. Notes of a meeting between the President of the Board of Trade and the Scottish Labour Group, 16 Dec. 1959

SRO (1959g) SEP 004/1659 Scottish Council investigation into production costs

SRO (1960a) SEP 004/1658. Distribution of industry committee, notes for the secretary of state, Jan. 1960

SRO (1960b) SEP 004/1662. Report of a meeting between the Secretary of State for Scotland and the Prime Minister, 29 June 1960

SRO (1960c) SEP 004/1815. Macbeth to Smith, 21 April 1960

SRO (1964) SEP4/1694. Comparison of number of days lost in stoppages due to industrial disputes, Nov. 1960

Bibliography

Abrams, M. and Rose, R. (1960) *Must Labour lose?* London: Penguin.

Adeney, M. (1988) *The motor makers: the turbulent history of Britain's car industry.* London: Fontana.

Alford, B.W.E. (1996) *Britain in the world economy since 1880.* London: Longman.

Alford, B.W.E., Lowe, R., and Rollings, N. (1992) *Economic planning, 1943-1951: a guide to documents in the Public Record Office.* London: HMSO.

Allan, R.J. (1991) *Geoffrey Rootes' dream for Linwood.* Minster Lovell, Oxfordshire: Bookmarque.

Allen, E., Odber, A.J., and Bowden, P.J. (1957) *Development area policy in the north east of England.* Newcastle: North East Industrial and Development Association.

Allen, K. (1979) *Balanced national growth.* Lexington: Lexington Books.

Allen, K. and Maclennan, M.C. (1970) *Regional problems and policies in Italy and France.* Allen & Unwin: London.

Altshuler, A., Anderson, M., Jones, D., Roos, D., and Womack, J. (1984) *The future of the automobile.* London: MIT Press.

AMMA (1992) *World Motor Industry Statistics.* New York: AMMA.

Anon. (1924) *New York regional plan.* New York: New York City.

Anon. (1930) 'Variations in the cost of power in different locations', *Electrical Review Supplement.*

Armstrong, A.G. (1967) 'The motor industry and the British economy', *District Bank Review*, pp. 19-40.

Armstrong, A.G. and Odling-Smee, J.C. (1979a) 'The demand for new cars (1) - a theoretical model of replacement demand', *Oxford Bulletin of Economics and Statistics*, 40, pp. 281-301.

Armstrong, A.G. and Odling-Smee, J.C. (1979b) 'The demand for new cars (2) - an empirical model for the UK', *Oxford Bulletin of Economics and Statistics*, 41, pp. 193-214.

Armstrong, H.W. (1991) 'Regional problems and policies', in N.F.R. Crafts and N.W.C. Woodward (eds.) (1991) *The British economy since 1945.* Oxford: Clarendon Press, pp. 291-334.

Armstrong, H. and Taylor, J. (1993) *Regional economics and policy*, 2nd edn. London: Harvester Wheatsheaf.

Austin Rover (1985) *BL historical production figures.* Oxford: Austin Rover.

Bank of England (1988) 'Regional labour markets in Great Britain', *Bank of England Quarterly Bulletin*, 28, pp. 367-75.

Barber, J.N.R. (1975) 'Oral evidence', in House of Commons (ed.) (1975) *Fourteenth report from the Expenditure Committee, The motor vehicle industry, Session 1974-75, Minutes of evidence taken before the Trade and Industry Sub-Committee.* London: HMSO, pp. 116-44.

Barberis, P. and May, T. (1993) *Government, industry and political economy.* Buckingham: Open University Press.

Bardou, J.P., Chanaron, J., Fridenson, P., and Laux, J.M. (1982) *The Automobile Revolution: The Impact of an industry (Translated from the French by J.M. Laux).* North Carolina, US: Chapel Hill.
Barna, T. (1952) 'The interdependence of the British economy', *Journal of the Royal Statistical Society*, A. 115, pp. 29-77.
Barnett, C. (1986) *The audit of war: the illusion and reality of Britain as a great nation.* London: Macmillan.
Barnett, C. (1995) *The lost victory: British dreams, British realities 1945-1950.* London: Macmillan.
Bates, J. and Reid, G.L. (1962) 'Supplementary labour costs and their effect on wage bills', *Three Banks Review*, 55, pp. 22-39.
Bennett, R.J. (1986) 'The impact of non-domestic rates on profitability and investment', *Fiscal Studies*, 7, pp. 2-50.
Bescoby, J. and Turner, H.A.(1961) 'An analysis of the postwar labour disputes in the British car manufacturing firms', *The Manchester School*,, pp. 133-60.
Beynon, H. (1984) *Working for Ford*, 2nd edn. London: Penguin.
Bhaskar, K. (1975) *Alternatives open to the UK Motor Industry: analysis and evaluation.* Bristol: University of Bristol.
Bhaskar, K. (1979) *The future of the UK motor industry.* London: Kogan Page.
Bhaskar, K.N. (1983) *The future of the UK and European motor industry.* Bath: Sewells.
Binmore, K. and Dasgupta, P. (1986) 'Game theory: a survey', in K. Binmore and P. Dasgupta (eds.) (1986) *Economic organisations as games.* Oxford: Basil Blackwell, pp. 1-45.
Blackaby, D.H. and Manning, D.N. (1987) 'Regional earnings revisited', *The Manchester School of Economic and Social Studies*, pp. 158-83.
Blake, N. (1995) 'The regional implications of macroeconomic policy', *Oxford Review of Economic Policy*, 11, pp. 145-64.
Blank, S. (1972) *Government and industry in Britain.* Farnborough: Saxon House.
Blaug, M. (1985) *Economic theory in retrospect*, 4th edn. Cambridge: Cambridge University Press.
Bloomfield, G. (1972) *The world automotive industry.* Newton Abbot: David & Charles.
Board of Trade (1937) *Memorandum of evidence of the Board of Trade to the Royal Commission on the Geographical Distribution of the Industrial Population.* London: HMSO.
Board of Trade (1955) 'Ten Years of Industrial Building in Great Britain', *Board of Trade Journal*, 169, pp. 421-7.
Booth, A.E. (1975) 'The timing and content of government policies to assist the depressed areas, 1920-1939', unpublished Ph.D. Dissertation, University of Kent at Canterbury.
Booth, A.E. (1982) 'The Second World War and the origins of modern regional policy', *Economy and Society*, 21, pp. 1-21.
Bos, G.G.J. (1970) *A logistic approach to the demand for private cars.* Rotterdam: Tilburg University Press.

Bowden, S.M. (1991) 'Demand and supply constraints in the inter-war UK car industry: did the manufacturers get it right?', *Business History*, 33, pp. 241-67.
Bowden, S.M. and Turner, P. (1991) 'Productivity and long-term growth potential in the UK economy, 1924-1968', *Applied Economics*, 23, pp. 1425-32.
Bowden, S.M. and Turner, P. (1993) 'Some cross-section evidence on the determinants of the diffusion of car ownership in the inter-war UK economy', *Business History*, 35, pp. 55-69.
Brittan, S. (1971) *Steering the economy: the role of the Treasury*, rev. edn. Harmondsworth: Penguin Books.
Broadberry, S.N. (1991) 'Unemployment', in N.F.R. Crafts and N.W.C. Woodward (eds.) (1991) *The British economy since 1945*. Oxford: Clarendon Press, pp. 212-35.
Broadberry, S.N. (1997) *The productivity race: British manufacturing in international perspective 1850-1990*. Cambridge: Cambridge University Press.
Broadberry, S.N. and Crafts, N.F.R. (1990) 'The implications of British macroeconomic policy in the 1930s for long run growth performance', *Rivista di Storia Economica*, 7, pp. 1-19.
Broadberry, S.N. and Crafts, N.F.R. (1996) 'British economic policy and performance in the early postwar period', *Business History*, 38, pp. 65-91.
Brown, A.J. (1969) 'Surveys of applied economics: regional economics, with special reference to the United Kingdom', *Economic Journal*, 79, pp. 759-96.
Brown, A.J. (1972) *The framework of regional economics in the United Kingdom*. London: Cambridge University Press.
Brown, A.J. and Burrows, E.M. (1977) *Regional economic problems: comparative experiences of some market economies*. London: Allen & Unwin.
Brown, W. (1981) *The changing contours of British industrial relations*. Oxford: Blackwell.
Bulmer, M., Bales, K., and Sklar, K. (1991) *The social survey in historical perspective*. Cambridge: Cambridge University Press.
Burnham, P. (1995) 'Rearming for the Korean War: the impact of government policy on Leyland motors and the British car industry', *Contemporary Record*, 9, pp. 343-67.
Butler, D. and Rose, R. (1960) *The general election of 1959*. London: Macmillan.
Cairncross, A.K. (1952) *Report of the Committee on Local Development in Scotland*. Edinburgh: Scottish Council (Development and Industry).
Cairncross, A.K. (1985) *Years of recovery: British economic policy, 1945-51*. London: Methuen.
Cameron, G.C. and Clark, B.D. (1966) *Industrial movement and the regional problem*. Edinburgh: University of Glasgow Social and Economic Studies, Occasional Paper No.5, Oliver and Boyd.
Cao-Pinna, V. (1974) 'Regional Policy in Italy', in N.M. Hansen (ed.) (1974) *Public policy and regional economic development - the experience of nine western countries*. Cambridge, Mass: Ballinger, pp. 137-79.
Carlos, A.N. and Hoffman, E. (1986) 'The north American fur trade: bargaining to a joint profit maximum under incomplete information, 1804-1821', *Journal of Economic History*, 46, pp. 967-86.

Carlos, A.M. and Hoffman, E. (1988) 'Game theory and the north American fur trade: a reply', *Journal of Economic History*, 48, pp. 681.
Carr, C. (1990) *Britain's competitiveness: the management of the vehicle components industry*. London: Routledge.
Caves, R.E. (1980) 'Productivity differences among industries', in R.E. Caves and L.B. Krause (eds.) (1980) *Britain's economic performance*. Washington, DC: Brookings Institution, pp. 135-98.
Central Office of Information (1977) *British industry today: motor vehicles*. London: HMSO.
Central Policy Review Staff (1975) *The future of the British car industry*. London: HMSO.
Champernowne, D.C. (1938) 'The uneven distribution of unemployment in the United Kingdom, 1929-36 - I', *Review of Economic Studies*, 5, pp. 93-106.
Chandler, A.D. (1990) *Scale and scope: the dynamics of industrial capitalism*. Cambridge, MA: Harvard University Press.
Chapman, R.A. (1988) *Ethics in the British civil service*. London: Routledge.
Charlesworth, A., Gilbert, D., Randall, A., Southall, H., and Wrigley, C. (1996) *An atlas of industrial protest in Britain, 1750-1990*. London: Charlesworth.
Cherry, G.E. (1974) *The evolution of British town planning: a history of town planning in the United Kingdom during the 20th century and of the Royal Town Planning Institute, 1914-74*. Leighton Buzzard: Leonard Hill Books.
Chick, M. (1992) 'Private industrial investment', in H. Mercer, N. Rollings and J. Tomlinson (eds.) (1992) *Labour governments and private industry: the experience of 1945-1951*. Edinburgh: Edinburgh University Press, pp. 74-90.
Chrysler UK (1973) 'Memorandum on regional development incentives', in House of Commons (ed.) (1973) *Expenditure Committee (Trade and Industry Sub-Committee), Regional development incentives, Session 1972-73, Minutes of evidence, HC 327*. London: HMSO, pp. 40-7.
Church, R.A. (1994) *The rise and decline of the British motor industry*. London: Macmillan.
Church, R. (1996) 'Deconstructing Nuffield: the evolution of managerial culture in the British Motor Industry', *Economic History Review*, 2. XLIX, pp. 561-83.
Clyde Valley Regional Planning Committee (1948) *Clyde Valley Regional Plan 1946*. Glasgow: Clyde Valley Regional Planning Committee.
Collins, P. and Stratton, M. (1993) *British car factories from 1896 - a complete historical, geographical, architectural & technological survey*. Godmanstone, Dorset: Veloce Publishing.
Cotterill, C.H. (1950) *Industrial plant location: its application to zinc smelting*. St Louis: American Zinc, Lead and Smelting Company.
Cowling, K. (1980) 'The motor industry', in K. Cowling (ed.) (1980) *Mergers and economic performance*. Cambridge: Cambridge University Press, pp. 170-90.
Cowling, K. and Cubbin, J. (1971) 'Price, quality and advertising competition: an econometric investigation of the UK car market', *Economica*, 38, pp. 378-94.
Cowling, K. and Metcalf, D. (1967) 'Wage-unemployment relationships: a regional analysis for the UK 1960-65', *Bulletin of the Oxford Institute of Economics and Statistics*, 29, pp. 31-9.

Cowling, K. and Rayner, A.J. (1970) 'Price, quality and market share', *Journal of Political Economy*, 78, pp. 1292-309.
Craig, P. (1957) 'Location factors in the development of steel centres', *Regional Science Association Papers*, 3, pp. 250-65.
Creigh, S.W. and Evans, E.W. (eds) (1977) *Industrial conflict in Britain*. London: Cass.
Crompton, D., Barlow, A.T., and Downing, S. (1976) *Components suppliers to the car industry, the West Midlands economy*. London: Department of Industry.
CSO (1964) *Annual abstract of statistics, No 101*. London: HMSO.
CSO (1974) *Business Monitor: annual census of production, summary volume*. London, HMSO.
CSO (1981) *Business Monitor: annual census of production, summary volume*. London, HMSO.
CSO (1988) *Business Monitor: annual census of production, summary volume*. London, HMSO.
Cubbin, J. and Leech, D. (1976) *Import penetration in the UK passenger car market: a cross sectional survey for 1975*. Coventry: Warwick Economic Research Papers, Department of Economics, University of Warwick, number 88.
Cullingworth, J.B. (1979) *Environmental planning 1939-1969, Volume III, New towns policy*. London: HMSO.
Cunningham, W. (1902) 'The localisation of industry', *Economic Journal*, 12, pp. 501-6.
Davies, S.W. and Caves, R.E. (1987) *Britain's productivity gap*. Cambridge: Cambridge University Press.
Deane, P. (1953) 'Regional variations in United Kingdom incomes from employment, 1948', *Journal of the Royal Statistical Society, Series A*, CXVI, pp. 123-55.
Dennison, S.R. (1939) *The location of industry and the depressed areas*. London: Oxford University Press.
Dept of Employment (1977) 'Labour costs in Great Britain 1975: regional analysis', *Department of Employment Gazette*, pp. 1358-67.
Dept of Employment and Productivity, (1960-1985) 'Regional analysis of strike statistics', *Ministry of Labour Gazette*.
Dickerson, A.P. (1992) 'Industrial conflict in Britain', unpublished Ph.D. Dissertation, University of Warwick, Coventry.
Dicks-Mireaux, D.A. (1961) 'Prospects for the British car industry', *National Institute Economic Review*, 17 (September).
Dow, J.C.R. (1964) *The management of the British economy, 1945-60*. Cambridge: Cambridge University Press.
DTI (1973a) 'Costs to certain firms following the application of government regional policy, Annex A, Information supplied by British Leyland Motor Corporation Ltd', in House of Commons (ed.) (1973) *Expenditure Committee (Trade and Industry Sub-Committee), Regional Development Incentives, Session 1972-73, Minutes of Evidence, HC 327*. London: HMSO, pp. 415-16.
DTI (1973b) 'Inquiry into location attitudes and experience, memorandum submitted by the Department of Trade and Industry', in House of Commons (ed.) (1973) *Expenditure Committee (Trade and Industry Sub-Committee), Regional*

Development Incentives, Session 1973-74, Minutes of Evidence. London: HMSO, pp. 525-684.
Dunnett, P.J.S. (1980) *The decline of the British motor industry: the effects of government policy, 1945-1979*. London: Croom Helm.
Dunning, J.H. and Hague, D.C. (1954-55) 'Costs in alternative locations: the radio industry', *Review of Economic Studies*, 22, pp. 203-13.
Durcan, J.W., McCarthy, W.E.J., and Redman, G.P. (1983) *Strikes in post-war Britain: a study of stoppages due to industrial disputes, 1946-73*. London: George Allen & Unwin.
Economic Development Committee for the Motor Manufacturing Industry (1967) *The effects of government economic policy on the motor industry*. London: National Economic Development Office.
Edwards, P.K. (1986) *Conflict at work: a materialist analysis of workforce relations*. Oxford: Basil Blackwell.
Edwards, S. (1975) 'Regional variations in freight costs', *Journal of Transport Economics and Policy*, IX, No.2.
Ellison, T. (1886) *The cotton trade of Great Britain*. London: E. Wilson.
Employment Department (1991) *Industrial stoppages data (computer file)*. Colchester: ESRC Data Archive.
Ford Motor Co Ltd (1973) 'Memorandum on regional investment', in House of Commons (ed.) (1973) *Expenditure Committee (Trade and Industry Sub-Committee). Regional development incentives, Session 1972-73, Minutes of evidence*. London: HMSO, pp. 76-85.
Foreman, S. (1986) *Shoes and ships and sealing-wax: an illustrated history of the Board of Trade 1786-1986*. London: HMSO.
Foreman-Peck, J.S., Bowden, S.M., and McKinlay, A. (1995) *The British motor industry*. Manchester: Manchester University Press.
Freidman, H. and Meredeen, S. (1980) *The dynamics of industrial conflict - lessons from Ford*. London: Croom Helm.
Gibson, J.G. (1992) 'The effects of unemployment on voting in British elections: a new specification of a political-economic model of constituency voting', *Environment and Planning C*, 10, pp. 451-65.
Goodhart, C.A.E. and Bhansali, R.J. (1970) 'Political economy', *Political Studies*, 18, pp. 43-106.
Goodman, J.F.B. and Samuel, P.J. (1966) 'The motor industry in a Development Area: a case study of the labour factor', *British Journal of Industrial Relations*, 4, pp. 336-65.
Goodwin, E. (1962) 'Relocation of the British motor industry', *The Professional Geographer*, XIV, pp. 4-8.
Gordon, I.R. (1990) 'Regional policy and national politics in Britain', *Environment and Planning C*, 8, pp. 427-38.
Gravier, J.-F. (1947) *Paris et le desert francais*. Paris.
Greenhut, M.L. (1956) *Plant location in theory and practice*. Chapel Hill: University of North Carolina Press.
Grief, A. (1996) 'The study of organizations and evolving organizational forms through history: reflections from the late medieval family firm', *Industrial and Corporate Change*, 5, pp. 473-501.

Guest, D. and Rosenthal, P. (1993) 'Industrial relations in greenfield sites', in D. Metcalf and S. Milner (eds.) (1993) *New perspectives on industrial disputes.* London: Routledge, pp. 13-35.

Hague, D.C. and Newman, P.K. (1952) *Costs in alternative locations: the clothing industry.* Cambridge: Cambridge University Press.

Hall, F. 'The localisation of industries', *12th US Census Manufactures Section*, part 1.

Hamper, B. (1992) *Rivethead - tales from the assembly line.* London: Fourth Estate.

Hansen, N.M. (1968) *French regional planning.* London: Indiana University Press.

Hansen, N.M. (1974) *Public policy and regional economic development - the experience of nine western countries.* Cambridge, Mass.: Ballinger.

Hansen, N., Higgins, B., and Savoi, D.J. (1990) *Regional policy in a changing world.* London: Plenum Press.

Harrington, J.W. and Warf, B. (1995) *Industrial location: principles, practice and policy.* London: Routledge.

Harris, A.I. and Clausen, R. (1967) *Labour mobility in Great Britain, 1953-63.* London: HMSO.

Hart, R.A. and Mackay, D.I. (1975) 'Engineering earnings in Britain, 1914-68', *Journal of the Royal Statistical Society, Series A*, 138, pp. 32-50.

Hawkesworth, R.I. (1977) 'Fringe benefits in British industry', *British Journal of Industrial Relations*, 15, pp. 396-402.

Heim, C.E. (1987a) 'Government research establishments, state capacity and distribution of industry policy in Britain', *Regional Studies*, 22, pp. 375-86.

Heim, C.E. (1987b) 'R&D, defense and spatial divisions of labor in twentieth century Britain', *Journal of Economic History*, 47, pp. 365-78.

Henderson, P.D. (1986) *Innocence and design: the influence of economic ideas on policy.* Oxford: Basil Blackwell.

Hendricks, A.J. (1974) 'Regional policy in the Netherlands', in N.M. Hansen (ed.) (1974) *Public policy and regional economic development - the experience of nine western countries.* Cambridge, Mass: Ballinger, pp. 181-97.

Henshaw, D. and Henshaw, P. (1988) *Apex: the inside story of the Hillman Imp.* London: Bookmark Publishing.

Hess, R.J. (1977) 'A comparison of automobile demand equations', *Econometra*, 45, pp. 683-701.

Heywood, J.S. (1989) 'Discrimination in the provision of fringe benefits', *Economics Letters*, 31, pp. 95-8.

Hill, T.P. and Knowles, K.G.J.C. (1956) 'The variability of engineering earnings', *Bulletin of the Oxford Institute of Statistics*, 18, pp. 97-139.

HMSO (1928) Industrial Transference Board, *Report.*, BPP 1928 (3156), x, 783.

HMSO (1934) Ministry of Labour, *Investigations into the industrial conditions in certain depressed areas*, BPP 1933-4 (4728), xiii, 313.

HMSO (1935) Ministry of Labour, *First report of the Commissioner for the Special Areas (England and Wales)*, BPP 1934-5 (4957), x, 149.

HMSO (1936) Ministry of Labour, *Third report of the Commissioner for the Special Areas (England and Wales)*, BPP 1936-7 (5303), xii, 661.

HMSO (1937b) *Minutes of evidence taken before the Royal Commission on the Geographical Distribution of the Industrial Population.* London: HMSO.
HMSO (1938a) *Memorandum of evidence submitted by the Board of Trade, Royal commission on the distribution of the industrial population (Barlow commission), Minutes of evidence.*
HMSO (1938b) *Ministry of Labour, Report of the Commissioner for the Special Areas in England and Wales for the year ended 30th September 1938,* BPP 1938-9 (5896), xii, 221.
HMSO (1940) *Royal commission on the distribution of the industrial population (Barlow commission), Report,* BPP 1939-40 (6153), iv, 263.
HMSO (1944) Ministry of Reconstruction, *Employment policy after the war,* BPP 1943-4 (6527), viii, 119.
HMSO (1955) *Second report for the select committee on estimates, Session 1955-56, The development areas.* London: HMSO.
HMSO (1962) *Seventh report from the Estimates Committee on the administration of the Local Employment Act 1960, Session 1962-62, Minutes of Evidence.* London: HMSO.
HMSO (1963a) *Central Scotland: a programme for development and growth.* London: HMSO.
HMSO (1963b) *The North East: a programme for development and growth.* London: HMSO.
HMSO (1964) *Input-output tables for the UK, 1954.* London: HMSO.
HMSO (1971) *Department of Employment and Productivity, British labour statistics: historical abstract, 1886-1968.*
HMSO (1972) *Sixth report from the Expenditure Committee together with minutes of evidence taken before the Trade and Industry Sub-Committee, Session 1971-72, Public Money in the Private Sector,* 3 Vols. HC347 (1973/4). London: HMSO.
HMSO (1973a) *Expenditure Committee (Trade and Industry Sub-Committee), Regional Development Incentives, Minutes of Evidence and Appendices,* HC 327. London: HMSO.
HMSO (1973b) *Expenditure Committee (Trade and Industry Sub Committee), session 1973-74, Regional development incentives: final report.* London: HMSO.
HMSO (1975a) *British Leyland the next decade (The Ryder Report),* HC342, 1974/5. London: HMSO.
HMSO (1975b) *Fourteenth report from the Expenditure Committee: the motor vehicle industry, Session 1974-75, HC 617.* London: HMSO.
HMSO (1976) *Chrysler UK, 8th Report of the Trade and Industry Sub-Committee of the Expenditure Committee,* HC 617. London: HMSO.
HMSO (1978) Government Statistical Service, *Historical record of the census of production, 1907 to 1970.* London: HMSO.
HMSO (1982) *Transport statistics, Great Britain. 1971-81.* London: HMSO.
HMSO (1986b) *The effects of government regional economic policy.* London: HMSO.
HMSO (1987a) *The UK components industry, Third Report of the Trade and Industry Select Committee,* HC407, 1986-7. cars: HMSO.

HMSO (1987b) Government Statistical Service, *Report of the census of production*. London: HMSO.
Hodges, M. (1974) *Multinational corporations and national governments: a case study of the UK experience*. Farnborough: Saxon House.
Holmans, A.E. (1987) *Housing policy in Britain: a history*. London: Croom Helm.
Hoover, E.M. (1932) 'The localisation of the shoe industry in the USA', *Quarterly Journal of Economics*, 47, pp. 254-75.
Hoover, E.M. (1949) *The location of economic activity*. London: Macgraw-Hill.
Howard, R.S. (1968) *The movement of manufacturing industry in the UK 1945-65*. HMSO: London.
Isard, W. (1956) *Location and space economy*. Cambridge, Mass: MIT.
Isard, W. and Capron, J.H. (1949) 'The future locational pattern of iron and steel production in the United States', *Journal of Political Economy*, 57, pp. 118-33.
Jay, D. (1980) *Change and fortune: a political record*. London: Hutchinson.
Jewkes, J. (1930) 'The localisation of the cotton industry', *Economic History*, 11, pp. 91-106.
Johnson, R.J. and Pattie, C.J. (1992) 'Unemployment, the poll tax and the British general election of 1992', *Environment and Planning C*, 10, pp. 468-83.
Jones, D.T. and Prais, S.J. (1978) 'Plant-size and productivity in the motor industry: some international comparisons', *Oxford Bulletin of Economics and Statistics*, 40, pp. 131-51.
Jones, J.H. (1938) 'Memorandum of evidence submitted to the Royal Commission on the Distribution of the Industrial Population', in HMSO (ed.) (1938) *Minutes of evidence*. London: HMSO.
Jurgens, U., Malsche, T., and Dohse, K. (1993) *Breaking from Taylorism: changing forms of work in the automobile industry*. Cambridge: Cambridge University Press.
Kelly, J. and Nicholson, N.(1980) 'Strikes and other forms of industrial action', *Industrial Relations Journal*, 4, pp. 159-75.
Kendrick, S. and McCrone, D. (1989) 'Politics in a cold climate: the Conservative decline in Scotland', *Political Studies*, XXXVII, pp. 589-603.
Kennelly, R.A. (1954) 'The location of the Mexican steel industry', *Revista Geografia*, 15, pp. 109-29.
Kennelly, R.A. (1955a) 'The location of the Mexican steel industry', *Revista Geografia*, 16, pp. 199-213.
Kennelly, R.A. (1955b) 'The location of the Mexican steel industry', *Revista Geografia*, 17, pp. 60-77.
Knight, K.G. (1989) 'Labour productivity and industrial relations in British production industries: some quantitative evidence', *British Journal of Industrial Relations*, 27, pp. 365-74.
Knowles, K.G.J.C. (1952) *Strikes: a study in industrial conflict: with special reference to British experience between 1911 and 1947*. Oxford: Blackwell.
Kramer, G. (1971) 'Short term fluctuations in US voting behaviour, 1896-1964', *Political Science Review*, 65, pp. 131-43.
Kryzanowski, W. (1927) 'Review of the literature of location of industries', *Journal of Political Economy*, 6, pp. 278-91.

Lancaster, B. and Mason, T. (eds.) (1986) *Life and labour in a twentieth century city: the experience of Coventry*. London: Cryfield.
Landes, D.S. (1969) *The unbound prometheus: technological change and industrial development in western Europe from 1750 to the present*. Cambridge: Cambridge University Press.
Langworth, R. and Robson, G. (1979) *Triumph Cars - the complete 75 year history*. London: Motor Racing Publications Ltd.
Leech, D. and Cubbin, J. (1978) 'Import penetration in the UK passenger car market: a cross sectional survey', *Applied Economics*, 10, pp. 289-303.
Lewchuk, W.A. (1985) 'The return to capital in the British motor vehicle industry, 1896-1939', *Business History*, 27, pp. 3-25.
Lewchuk, W.A. (1986) 'The motor vehicle industry', in B. Elbaum and W.H. Lazonick (eds.) (1986) *The decline of the British economy*. Oxford: Clarendon Press, pp. 135-61.
Lewchuk, W.A. (1987) *American technology and the British motor vehicle industry*. Cambridge: Cambridge University Press.
Lindberg, O. (1953) 'An economic-geographic study of the localisation of the Swedish paper industry', *Geografiska Annaler*, 35, pp. 28-40.
Loasby, B.J. (1965) 'Location of industry: thirty years of "planning"', *District Bank Review*, 156, pp. 28-52.
Loebl, H. (1988) *Government factories and the origins of British regional policy, 1934-1948, including a case study of North Eastern Trading Estates Ltd.* London: Croom Helm.
Luttrell, W.F. (1952) *The cost of industrial movement*. Cambridge: Cambridge University Press.
Luttrell, W.F. (1962) *Factory location and industrial movement: a study of recent experience in Great Britain*, 2 vols. London: NIESR.
Machin, S.J. (1988) 'The productivity effects of unionisation and firm size in British engineering firms', *University of Warwick; Warwick Economic Research Papers*, No 293.
Macmillan, H. (1971) *Riding the storm, 1956-1959*. London: Macmillan.
Macmillan, H. (1972) *Pointing the way, 1959-61*. London: Macmillan.
Madden, G.C. (1988) 'Aggregate studies of automobile demand: a review', *International Journal of Transport Economics*, XV, pp. 129-58.
Marquand, J. (1980) Measuring the effects and costs of regional incentives. *Government Economic Service Working Paper*. London: HMSO.
Marsdon, D., Morris, T., Willman, P., and Wood, S. (1985) *The car industry: labour relations and industrial adjustment*. London: Tavistock Publications.
Maudling, R. (1978) *Memoirs*. London: Sidgwick & Jackson.
Maxcy, G. (1958) 'The motor industry', in P.L. Cook (ed.) (1958) *The effects of merger*. London: Allen and Unwin, pp. 367-80.
Maxcy, G. and Silberston, A. (1959) *The motor industry*. London: Allen & Unwin.
McCallum, J.D. (1979) 'The development of British regional policy', in D. Maclennan and J.B. Parr (eds.) (1979) *Regional policy: past experience and new directions*. Oxford: Martin Robertson, pp. 3-41.

McCarthy, P.S. (1996) 'Market price and income elasticities of new vehicle demands', *Review of Economics and Statistics*, 78, pp. 543-41.
McCormick, B. (1991) 'Migration and regional policy', in A. Bowen and K. Mayhew (eds.) (1991) *Reducing regional inequalities*. London: Kogan Page, pp. 216-45.
McCrone, G. (1969) *Regional policy in Britain*. London: Allen & Unwin.
McKay, S., Pearson, M., and Smith, S. (1990) 'Fiscal instruments in environmental policy', *Fiscal Policy*, 11, pp. 1-20.
McKinlay, A. and Starkey, K. (1994) 'After Henry: continuity and change in the Ford Motor Company', *Business History*, 36, pp. 184-205.
Meeks, G. (1977) *Disappointing marriage: a study of the gains from merger*. Cambridge: Cambridge University Press.
Melman, S. (1958) *Decision making and productivity*. Oxford: Basil Blackwell.
Mercer, H. (1995) *Constructing a competitive order: the hidden history of British anti-trust policies*. Cambridge: Cambridge University Press.
Mess, H.A. (1937) 'The present position in the distressed areas', *Political Quarterly*, 8, pp. 353-63.
Meynell, A. (1959) 'Location of industry', *Public Administration*, pp. 9-20.
Meynell, A. (1988) *Public servant private woman*. London: Gollancz.
Middlemas, K. (1986) *Power, competition and the state, 1: Britain in search of balance, 1940-61*. London: Macmillan.
Middlemas, K. (1989) *Power, competition and the state, 2: Britain, 1961-74: threats to the postwar settlement*. London: Macmillan.
Middleton, R. (1985) 'Unemployment in the north east during the interwar period', in R.A. Chapman (ed.) (1985) *Public policy studies: the north east of England*. Edinburgh: Edinburgh University Press, pp. 20-43.
Middleton, R. (1996) *Government versus the market: the growth of the public sector, economic management and British economic performance, c. 1890-1979*. Aldershot: Edward Elgar.
Mogridge, M.J.H. (1983) *The car market*. London: Pion Limited.
Moonman, J. (1973) *The effectiveness of fringe benefits in industry*. London: Gower Press.
Moore, B. and Rhodes, J. (1973) 'Evaluating the effects of British regional economic policy', *Economic Journal*, 83, pp. 87-110.
Moore, B. and Rhodes, J. (1977) 'The impact of regional policy in the seventies', *Centre for Environmental Studies Review*, 1, pp. 67-77.
Moore, B., Rhodes, J., and Tyler, P. (1986) *The effects of government regional policy*. London: HMSO.
Morewood, S. (1990) *Pioneers and inheritors*. Coventry: Centre for Business History, Coventry Polytechnic.
Moritz, M. and Seaman, B. (1981) *Going for broke: the Chrysler story*. New York: Doubleday & Co.
NEDO (1976) 'Cyclical fluctuations in the United Kingdom economy', *NEDO Discussion Paper*.
Nelson, W.H. (1970) *Small wonder - the amazing story of the Volkswagen*. London: Hutchinson.

Nevins, A. and Hill, F.E. (1957) *Ford: expansion and challenge 1915-33*. New York: Ford.
Nicholson, N. and Kelly, J. (1980) 'Strikes and other forms of industrial action', *Industrial Relations Journal*, 4, pp. 159-75.
Nicholson, R.J. (1956) 'The regional location of industry: an empirical study based on the regional tables of the 1948 census of production', *Economic Journal*, 66, pp. 467-81.
Nicol, B. (1979) *Regional disincentive policy and inner area problems: a comparison of London and Paris*. Newcastle: Centre for Urban and Regional Development Studies, University of Newcastle Upon Tyne.
Nicol, B. and Wettman, R. (1978) 'Background notes to restrictive regional policy measures in the European Community', in K. Allen (ed.) (1978) *Balanced economic growth*. Lexington, Mass.: Lexington Books, pp. 157-230.
Nicol, W. and Yuill, D. (1980) *Regional problems and policies in Europe: the postwar experience*. Glasgow: Centre for the Study of Public Policy, University of Glasgow.
Nye, J.V. (1988) 'Game theory and the north America fur trade: a comment', *Journal of Economic History*, 48, pp. 677-80.
Odber, A.J. (1965) 'Regional policy in Great Britain', in F. Meyers (ed.) (1965) *Area redevelopment policies in Britain and the countries of the common market*. Washington, D.C.: US Department of Commerce, Area Redevelopment Administration, pp. 327-433.
OECD (1976) *Regional problems and policies in OECD countries. Volume 1 - France, Italy, Ireland, Denmark, Sweden, Japan*. Paris: OECD.
Orwell, G. (1934) *The road to Wigan Pier*. London: Heinemann, Gollancz.
Owens, J.R. and Wade, L.L. (1988) 'Economic conditions and political voting in Great Britain', *Political Studies*, XXXVI, pp. 30-51.
Parsons, D.W. (1986) *The political economy of British regional policy*. London: Croom Helm.
Payne, P.L. (1985) 'The decline of the Scottish heavy industries', in R. Saville (ed.) (1985) *The economic development of modern Scotland, 1950-1980*. Edinburgh: John Donald, pp. 79-113.
Peden, G.C. (1996) 'Economic knowledge and the state in modern Britain', in S.J.D. Green and R.C. Whiting (eds.) (1996) *The boundaries of the state in modern Britain*. Cambridge: Cambridge University Press, pp. 170-87.
Pencavale, J.H. (1977) 'The distributional and efficiency effects of trade unions in Britain', *British Journal of Industrial Relations*, 15, pp. 137-56.
PEP (1939) *Report on the location of industry: a survey of present trends in Great Britain affecting industrial location and regional economic development, with proposals for future policy*. London: PEP.
Picton, G. (1953) 'Notes on the establishment of branch factories', *Journal of Industrial Economics*, 1, pp. 126-31.
PIEDA (1994) *Transport costs in peripheral regions. report to the European Commission*. Belfast: Industry Department for Scotland and Department of Economic Development Northern Ireland.

Pike, A. (1994) 'New activities for old industrial spaces?: restructuring in the global automobile industry and old industrial regions of the UK', unpublished Ph.D. Dissertation, University of Liverpool, Liverpool.
Pimlott, B. (1985) *Hugh Dalton*. London: Cape.
Pissardes, C. and Wadsworth, J. (1989) 'Unemployment and the inter-regional mobility of labour', *Economic Journal*, 99, pp. 739-55.
Popplewell, F. (1906) *Some modern conditions and recent developments in iron and steel production in America*. New York: .
Prais, S.J. (1981) *Productivity and industrial structure: a statistical study of manufacturing industry in Britain, Germany and the United States*. Cambridge: Cambridge University Press.
Pred, A. (1968) *Behaviour and location: foundations for a geographic and dynamic location theory*. Lund: Royal University of Lund.
Predohl, A. (1928) 'The theory of location in relation to general economics', *Journal of Political Economy*, 36, pp. 371-90.
Priestley, J.R. (1977) *English journey*, rep. edn. Harmondsworth: Penguin Books.
Randall, P.J. (1973) 'The history of British regional policy', in G. Hallet, P.J. Randall and E.G. West (eds.) (1973) *Regional policy forever? Essays on the history, theory and political economy of forty years of regionalism*. London: IEA, pp. 19-58.
Reich, S. (1990) *The fruits of fascism: postwar prosperity in historical perspective*. London: Cornell University Press.
Rhys, D.G. (1972) *The motor industry: an economic survey*. London: Butterworth.
Richardson, K. (1972) *Twentieth century Coventry*. London: Macmillan.
Richardson, K. (1977) *The British motor industry, 1896-1939*. London: Macmillan.
Richardson, R. (1991) 'Trade unions and industrial relations', in N.F.R. Crafts and N.W.C. Woodward (eds.) (1991) *The British economy since 1945*. Oxford: Clarendon Press, pp. 417-42.
Robson, G. (1984) *The Rover story*, 3rd edn. Cambridge: Patrick Stephens.
Rodgers, A. (1952) 'Industrial inertia - a major factor in the location of the steel industry in the United States', *Geographical Review*, 42, pp. 56-66.
Rollings, N. (1994) '"Poor Mr Butskell: a short life wrecked by schizophrenia"?', *Twentieth Century British History*, 5, pp. 183-205.
Roos, D., Jones, D.T., and Womack, J.P. (1990) *The machine that changed the world*. London: Macmillan.
Rootes, G. (1991) *Carpe diem: the memoirs of Geoffrey Rootes*. : priv.pub.
Rosevear, S. (1998) 'Balancing business and the regions: British distribution of industry policy and the Board of Trade, 1945-51', *Business History*, 40, pp. 77-99.
Ross, E.A. (1896) 'The location of industry', *Quarterly Journal of Economics*, 10, pp. 247-68.
Rubenstein, J.M. (1992) *The changing US auto industry: a geographical analysis*. London: Routledge.

Saint-Paul, G. (1997) 'Is labour rigidity harming Europe's competitiveness? the effect of job protection on the pattern of trade and welfare', *European Economic Review*, 41, pp. 499-506.

Salt, J. (1967) 'The impact of the Ford and Vauxhall plants on the employment situation on Merseyside', *Tijdschrift voor Economische en Sociale Geografia*, 58, pp. 255-64.

Sanders, D. (1991) 'Government popularity and the next general election', *Political Quarterly*, 52, pp. 235-61.

Sanders, D., Marsh, D., and Ward, H. (1987) 'Government popularity and the Falklands War: an assessment', *British Journal of Political Science*, 17, pp. 281-314.

Saville, R. (1985) 'The industrial background to the postwar Scottish economy', in R. Saville (ed.) (1985) *The economic development of modern Scotland, 1950-1980*. Edinburgh: John Donald, pp. 1-46.

Scott, P. (1996) 'The worst of both worlds: British regional policy, 1951-64', *Business History*, 38, pp. 41-64.

Scott, P. (1997) 'Dispersion and decentralisation: British location of industry policies and regional development, 1945-60', *Economy and Society*, 26, pp. 579-98.

Scottish Council (1961) *Inquiry into the Scottish economy*. Edinburgh: Scottish Council.

Seawright, D. and Curtice, J. (1995) 'The decline of the Scottish Conservative and Unionist party 1950-92: religion, ideology or economics?', *Contemporary Record*, 9, pp. 319-42.

Seldon, A. (1981) *Churchill's Indian summer: the Conservative government, 1951-55*. London.

Self, P. (1959) 'Editorial', *Town and Country Planning*, 28, pp. 219-20.

Self, P. (1961) *Cities in flood: the problems of urban growth*. London: Faber.

Shannahan, E. (1927) 'Economic factors in the changing distribution of population between urban centres and rural areas', *Economic Journal*, XXXVII, pp. 395-403.

Silberston, A. and Pratten, C. (1967) 'International comparisons of labour productivity in the automobile industry, 1955-65', *Bulletin of the Oxford Institute of Statistics*, 24, pp. 373-90.

Sims, D. and Wood, M. (1984) *Car manufacturing at Linwood: the regional policy issues*. Paisley: Clyde Valley Industrial Policy Archive, Department of Politics and Sociology, Paisley College.

Smith, C.T.B., Clifton, R., Makeham, P., Creigh, S.W., and Burn, R.V. (1978) *Strikes in Britain: a research study of industrial stoppages in the United Kingdom*. London: Manpower Paper No 15.

Smith, D.M. (1966) 'A theoretical framework for geographic studies of industrial location', *Economic Geography*, 42, pp. 95-113.

Smith, D.M. (1981) *Industrial location - an economic geographic analysis*. London: John Wiley.

Smith, H.L. (1928) *The Board of Trade*. London: Putnam.

Society of Motor Manufacturers and Traders (1939) *The motor industry of Great Britain*. London: SMMT.

Society of Motor Manufacturers and Traders (1991) *The motor industry of Great Britain*. London: SMMT.
Society of Motor Manufacturers and Traders (1993) *The motor industry of Great Britain*. London: SMMT.
Southall, H.R. (1988) 'The origins of the depressed areas: unemployment, growth, and regional economic structure in Britain before 1914', *Economic History Review*, 2nd ser. 41, pp. 236-58.
Stokes (1971) 'Oral Evidence', in House of Commons (ed.) (1971) *Minutes of evidence taken before the Trade and Industry Sub-Committee Session 1971-72, Public Money in the Private Sector*, III. London: HMSO, pp. 194-223.
Stoney, P. and Bourn, M. (1984) *Industrial development in Merseyside: motor vehicle assembly and the Port of Liverpool*. Liverpool: Gower.
Sykes, J. (1949) 'Some results of the Distribution of Industry Act 1945', *The Manchester School*, 9, pp. 36-48.
Taylor, J. (1993) 'An analysis of factors determining the geographical distribution of Japanese manufacturing investment in the UK, 1984-1991', *Urban Studies*, 30, pp. 1-17.
Thomas, H. (ed.) (1959) *The Establishment: a symposium edted by Hugh Thomas*. London: Anthony Blond.
Thoms, D. and Donnelly, T. (1985) *The motor car industry in Coventry since the 1890s*. London: Croom Helm.
Thoms, D.W. and Donnelly, T. (1986) 'Coventry's industrial economy, 1880-1980', in B. Lancaster and T. Mason (eds.) (1986) *Life and labour in a 20th century city: the experience of Coventry*. Coventry: Cryfield, pp. 11-56.
Tiebout, C.M. (1957) 'Location theory, empirical evidence and economic evolution', *Papers of the Regional Science Association*, 3, pp. 74-86.
Tiratsoo, N. (1990) *Reconstruction, affluence and Labour politics; Coventry 1945-60*. London: Routledge.
Tiratsoo, N. and Tomlinson, J. (1993) *Industrial efficiency and state intervention: Labour, 1939-1951*. London: Routledge.
Tolliday, S.W. and Zeitlin, J. (eds.) (1985) *Shop floor bargaining and the state: historical and comparative perspectives*. Cambridge: Cambridge University Press.
Townroe, P. (1971) *Industrial location decisions - a study in management behaviour*. Birmingham: Centre for Urban and Regional Studies, Occasional Paper 15, University of Birmingham.
Townroe, P.M. (1979) *Industrial movement: experience in the US and UK*. Farnborough: Saxon House.
Treble, J.G. (1989) 'Interpreting the record of wage negotiations under an arbitral regime: a game theoretic approach to the Coal Industry Conciliation Boards, 1893-1914', *Business History*, 31, pp. 61-80.
Turner, G. (1963) *The car makers*. London: Eyre & Spottiswode.
Turner, G. (1971) *The Leyland papers*. London: Eyre & Spottiswode.
Turner, H.A. (1969) *Is Britain really strike prone? A review of the incidence, character and costs of industrial conflict*. Cambridge: Cambridge University Press.
Turner, H.A., Clack, G., and Roberts, G. (1967) *Labour relations in the motor industry*. London: Allen & Unwin.

Turner, J. (1994) *Macmillan*. London: Longman.
Tyler, P. and Kitson, M. (1987) 'Geographical variations in transport costs of manufacturing firms in Great Britain', *Urban Studies*, 24, pp. 61-73.
Tyler, P., Moore, B.C., and Rhodes, J. (1988) 'Geographical variations in industrial costs', *Scottish Journal of Political Economy*, 35, pp. 22-50.
Vanhove, P. and Klaason, L.H. (1987) *Regional policy: a European approach*. Aldeshot: Avebury.
Vauxhall Motors Ltd (1973) 'Memorandum', in House of Commons (ed.) (1973) *Expenditure Committee (Trade and Industry Sub-Committee), Regional development incentives, Session 1972-73, HC 327*. London: HMSO, pp. 463-69.
Von Neuman, J. and Morgenstern, O. (1947) *Theory of games and economic behaviour*, 2nd edn. Princeton: Princeton University Press.
Walsh, J. and Brown, W. (1991) 'Regional earnings and pay flexibility', in A. Bowen and K. Mayhew (eds.) (1991) *Reducing Regional Inequalities*. London: Kogan Page, pp. 185-214.
Waymark, P. (1983) *The car industry: a study in economics and geography*. London: Sewells.
Weber, A. (1929) *Theory of the location of industries - translated with an introduction by Carl J. Freiderich*. Chicago: Chicago University Press.
Wever, E. (1986) 'Window on the Netherlands', *Tijdschrift voor Economische en Sociale Geografia*, 77, pp. 149-53.
Whisler, T.R. (1995) *At the end of the road: the rise and fall of Austin Healey, MG and Triumph Sports Cars*. London: JAI Press.
White, L.J. (1971) *The automobile industry since 1945*. Cambridge, Massachusetts: Harvard University Press.
Whiting, A. (1976) 'An international comparison of the instability of economic growth: is Britain's poor growth performance due to government stop-go induced fluctuations?', *Three Banks Review*, 109 (March), pp. 26-46.
Whittingham, T.G. and Towers, B. (1971) 'Strikes and the economy', *National Westminster Bank Quarterly Review*, November, pp. 33-42.
Wilks, S. (1984) *Industrial policy and the motor industry*. Manchester: Manchester University Press.
Williams, K., Haslam, C., Johal, S., and Williams, J. (1994) *Cars: analysis, history, cases*. Providence: Berghan Books.
Williams, K., Haslam, C., and Williams, J. (1992) 'Ford against fordism - the beginnings of mass production', *Work, Employment and Society*, 6, pp. 517-55.
Williams, K., Haslam, C., Williams, J., Aldcroft, A., and Johal, S. (1993) 'The myth of the line - Ford production of the Model T at Highland Park', *Business History*, 35, pp. 66-87.
Williams, K., Williams, J., and Haslam, C. (1986) *The breakdown of Austin Rover*. Oxford: Berg.
Williams, K. (1983) 'BMC/BLMC/BL - A misunderstood failure', in K. Williams, J. Williams and D. Thomas (eds.) (1983) *Why are the British bad at manufacturing*. London: Kegan Paul, pp. 217-88.
Woo, J.L.-C. (1986) 'Regional policy and the decentralistion of the British motor car industry', unpublished M.Litt Thesis, Cambridge University.

Wood, J. (1988) *Wheels of misfortune: the rise and fall of the British motor industry*. London: Sidgewick & Jackson.
Woollard, F. (1954) *Principles of mass and flow production*. London: Iliffe.
Young, S.C. and Lowe, A.V. (1974) *Intervention in the mixed economy: the evolution of British industrial policy, 1964-72*. London: Croom Helm.
Young, S. and Hood, N. (1977) *Chrysler UK: a corporation in transition*. New York: Praeger.